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INTRODUCTION

As we passed from the cessation of major hostilities to the struggle to build a satisfying postwar pattern of life, efforts have been made to make peacetime applications of the mental hygiene ideas and technics developed in response to war needs. Among the wartime developments that can be reconverted for use in industry, education, and the professions are methods of selecting leaders and a cautious use of group screening devices for quick appraisal of certain characteristics. Group therapy is one of the most important of the new applications of psychiatric treatment.

Social conditions contributing to family disorganization, disturbed status, and delinquency form a background against which measures of the improvement of mental health must be considered. Unless verbally expressed social values are translated into action, we cannot expect personal or international peace.

Despite war conditions, mental health in schools and colleges has received considerable attention during the last three years. Clinical studies continue to emphasize the importance of an individual's early experiences, especially parent-child relationships. Among the interrelated conditions conducive to the mental health of the school child and adolescent are the curriculum, methods of teaching, policies of promotion and marking, and enriched life experiences. Research and clinical studies reinforce the point of view that an understanding of individuals plus effective counseling and group work is basic to good mental health. Clinical studies especially give insight into conditions that influence adjustment and into the devious ways in which children and adolescents try to come to grips with reality.

Beyond the school walls, home and school conditions affect the mental health of individuals. A beginning has been made in studying the influence of forms of government and political systems on mental health. Likewise the effects of the war, of socio-economic and class status, and of different cultures are being explored. Delinquency has been given special attention and numerous programs for the prevention and treatment of delinquency have been described, but not evaluated by research workers who can view them objectively.

A valuable new feature of this issue is the chapter on contributions to mental hygiene from the field of comparative psychology. Experiments with the lower animals suggest ways in which behavior disorders and seizure states are induced by demanding excessively fine discriminations, by confronting the animal with impossible tasks, by creating conflicts, by imposing restraint that prevents the animal from substituting other ways out of the situation. Of the various methods of treatment, the most effective involved self-direction on the part of the individual in making his own readaptation to the situation.

The tendency to experiment in this field without adequate instruments for measuring results is still strong. Moreover, the complexity of counseling

and psychotherapy, including the individual differences in response to different methods of diagnosis and treatment makes a truly controlled experiment practically impossible.

Progress has been made in the clinical use of psychological tests and in the development of screening devices. More complete and dynamic clinical histories enable the worker to evaluate the therapeutic processes employed. The gap between the definition of personality as a dynamic organization and its measurement is being bridged by the study of syndromes, patterns, and clusters of measurable aspects. Of the various kinds of therapy, shock therapy is being used more conservatively and cautiously; group therapy, more widely and enthusiastically.

In the field of health education investigations relating to school health policies, administration, and content of health education have been made. Methods of motivation and teaching is a wide open fertile field for research.

Underlying school learning and health are the school health services. During this three-year period the educational aspects of school health service have been emphasized and research has shown that the teacher is competent to carry out his important role in the health program.

Evidence has been presented of greater individual growth in height and weight during the past fifty years. Altho the control of communicable diseases has not yet been achieved, experimental work in air sanitation by means of ultraviolet rays, germicidal sprays, and dust-suppressive measures is promising. The evaluation of school health services, health education, and physical education has led to the development of special statistical technics and newer methods of measuring health status, attitudes, behavior, and physical skills.

Some progress has been made in the quantitative assessment of physical fitness, motor skill, and general bodily efficiency. Evidence of the effectiveness of physical training programs geared to individual needs is accumulating. In the newer field of rehabilitation thru physical education activities, practice and theory are paving the way for research. This is the most recent issue of the REVIEW in which the contribution of physical education to health has been reviewed.

In most of the other chapters a continuity has been maintained by keeping the same titles and in several chapters the same authors as in the two previous issues. This issue covers references from July 1, 1943 to July 1, 1946.

RUTH STRANG, *Chairman,*
Committee on Mental and Physical Health.

CHAPTER I

Trends in Mental Hygiene

JOHN D. M. GRIFFIN and WILLIAM LINE

THE LAST three years have seen the climax and the close of World War II, and the subsequent chaos of a world left weary, cynical, and struggling to resume life on a peacetime pattern. While "peace" is always a relative term, the year just past can hardly be called peaceful, save in the sense that major hostilities have disappeared from the world scene. In their stead, however, there exists a seething restlessness, a bitter and irritable distrust among individuals, groups, and nations.

In such a time as this, workers in the field of mental hygiene are particularly challenged. So many events of major social and emotional interest are happening, that there is difficulty in finding time to take stock, or to develop a perspective. Yet those disciplines which come together in the mental hygiene interest must indeed assume the responsibility which is basically theirs, and clarify to the utmost their immediate and long-term objectives. Today, as never before, world sanity hangs on the virility of the dynamic social sciences, and on the direction charted by them.

Changing Interests in Mental Hygiene

Looking, first, at the current scene, one finds many evidences of changing emphasis in mental hygiene activities. During the war years, interest was focused on problems of military selection, and on the development of emergency and short forms of treatment for psychiatric casualties. Recently there has been a swing towards problems of rehabilitation and reconversion, with serious efforts at adapting the experience and technical advances gained in military settings to the needs of civilian life. Similarly, industrial mental hygiene has had to swerve from its emphasis on emergency selection of workers and on efficiency and morale under wartime motivation, to the far more difficult and subtle problem of interpersonal relations under post-war conditions; and the measure of this challenge is reflected in a degree of labor unrest far beyond that which was popularly anticipated.

Second, the mental hygiene workers themselves have suffered a marked change. During the war, they were mobilized by an international emergency, and had to cope, rather frantically at times, with practical problems of great moment. Having once emerged from the cloistered protection of the universities or from the placid despair of the mental hospital service, they are loath to return to any setting where their contribution assumes academic, philosophical, or merely custodial guise. They demand practical scope in the world of affairs—in industry, education, government. Even the tangible successes of private practice are satisfying only in a measure; they

must be supplemented by realistic application of the insight gained thru individual psychotherapy to the body politic itself.

Third, while education has had little opportunity during the war years to develop new technics or make striking advances of mental hygiene importance, nevertheless the educationist has been aware of the changes which have been tried. In consequence we are in the midst of a period wherein education is engaged in putting many of the ideas and technics tried in wartime to the test of experimental investigation and peacetime application.

The Effect of the War on Mental Hygiene

The general consensus seems to be that the actual physical violence of warfare has had less effect on the emotional stability and mental health of people, whether as fighting men or as home-front workers, than have the social and emotional factors of separation, evacuation and broken families.

Several authors have vigorously stressed the importance of selection. Technics employed in the psychiatric selection of officers have been shown to be particularly applicable in the fields of industry, education, and the professions (8, 4). During the war, psychologists were busy developing short objective group methods for screening service candidates. The practical use of such tests in civilian fields has already been demonstrated. This emphasis on short objective nonprojective tests is not without its dangers, however. There seems to be a tendency for many psychologists, and laymen who call themselves psychologists, who have had some experience with these short tests in the military services, to exploit them in the field of business and industry. The experience of World War I should be remembered. Psychological tests received a great deal of attention and publicity at that time only to be largely discredited subsequently. Unless psychologists and personnel workers recognize the importance of the qualitative evaluation of the individual by means of personal appraisal during the interview, or during the individually administered test, the whole fabric of psychological selection and placement may fall apart (6).

In reviewing the advances achieved in psychiatric treatment during the war, one is left a little skeptical that anything really new was discovered. Nevertheless, it is undoubtedly true that many new ways of applying old technics were demonstrated and have been shown to be useful in civilian life. Among the most important of these is group therapy. This had its beginning and was well established before the war (18). Group therapy now can hardly be described as a single technic. There are as many variations in actual procedure as there are psychotherapeutic points of view. It is an interesting fact however, that in spite of these differences in approach, all methods of psychotherapy in groups involve not only the effect of a leader on an audience of patients, but the effect of the group itself on each individual patient and the effect of individuals in the group on each other. This social and emotional relationship which has been shown to be so valuable therapeutically can be used with children in the classroom. Indeed the

method of using this type of discussion in teaching has long been recognized as a sound pedagogical method. The new trend in applying this technic to the classroom situation would seem to lie in the importance of estimating and utilizing the effect of different loadings of different types of personalities within the group. Thus, the Orthogenic School in Chicago is experimenting with the idea, long recognized by Fritz Redl and others, of mixing an appropriate number of aggressive children (for example) with children of a recessive type in an effort to capitalize on the therapeutic and prophylactic aspects of the internal structure and interpersonal relationships within the group.

Another development emanating from military experience was the intense effort to capitalize on the very intense medical interest in psychiatric aspects of rehabilitation. This was the keynote of a valuable conference of psychiatrists, sponsored by the National Committee for Mental Hygiene, at Hershey, Pennsylvania, in February, 1945 (5). The Veterans Administration has been quick to capitalize on this broad interest and is establishing excellent rehabilitation services which include not only clinical treatment facilities but mental hygiene units as well.

Of interest here to the educationist is the counseling service established by the Canadian universities in association with the Department of Veterans' Affairs. In an extension of rehabilitation counseling, begun prior to discharge, and continued during the period of reentry into civilian life, all ex-service personnel taking advantage of university training benefits have access to an advisory bureau, staffed by professional competent workers. Such a setting provides the basis of careful and intimate liaison between University Health Service and the teaching faculties, between academic and employment phases of the training courses. Its outcomes should be of great significance to the revitalizing of college mental hygiene and to educational guidance generally.

Turning for a moment to the broader fields of general medicine and social work, one may observe an intensification of interest on psychosomatic problems, as a result of military experience. The training programs in medical schools, both undergraduate and postgraduate, and in schools of social work have been modified as a result of this trend. Much more emphasis has been placed now on an appreciation of personality development and its influence on the clinical picture whether of physical symptoms or of social disability (16, 19).

Effects of War on Social and Economic Conditions and Mental Health

There have been some interesting studies of the effects of the war on social and family life, which in their significance in terms of postwar developments must be regarded as important as those emanating from the armed services. Levy (9) demonstrated, for example, that the effect of war on family life can be either beneficial in the sense of providing a general

stabilizing influence and a better economic situation, or it can be demoralizing and shattering, depending as one might anticipate, on the resources within the personality makeup of the individuals concerned. The effect of the very tight labor market during the war was to provide a state of almost full employment. Many thousands of people who were previously regarded as unemployable, either because of physical or mental handicaps, were put to work (12). Women and adolescents were also employed to a greater extent than ever before. Reconversion has substituted the more poorly paid peacetime factory work for the preferred highly paid war jobs. Women are generally unwilling to release the advantageous position of being independent wage earners in order to return to the role of the housewife. On the other hand, women are often unwilling to work for comparatively low rates of pay. Adolescents plucked too early from school and given streamlined training in war-plant trades are reluctant to return to school.

Many factors of this kind are at the root of climbing delinquency rates. Probably one of the most important indices of the social, emotional, and moral maladjustment of the nation is the juvenile delinquency rate. All kinds of factors, reasons, and excuses have been advanced to explain why there should be so much criminal behavior (1). Everything has been suggested from radio programs to the tendency of the adolescent to emulate the fancied behavior of his father or older brother in the fighting services. Many worthwhile and constructive plans have been put into effect in communities across the country. Most of these efforts have taken the form of increasing the facilities for leisure time activities for the age groups involved. It would appear that while supervised leisure time is important as a prophylactic measure, it can hardly be regarded as a basic remedy. Delinquency, like neurotic illness, is a symptom of personal maladjustment.

Increased Public Interest in Mental Hygiene and Psychiatry

It is of some interest to note the increasing consciousness of the public towards psychiatry and mental hygiene. It is astonishing to note the number of current movies and radio programs which are based on psychiatric themes. Some of these are gloriously but unwittingly burlesqued. In others however, a serious attempt has been made to obtain professional technical advice. Psychiatry has even crept into the everyday conversation and jokes of the people. In this setting of heightened public consciousness, the publicity which a year or two ago was given to the psychiatric war casualty found a ready response. Some of the effects of this publicity were hardly constructive and the anxiety and concern which were engendered in the families of servicemen and in industry, concerning the possible difficulties of rehabilitation, were exaggerated out of all proportion to the facts.

More recently the woefully inadequate facilities for the care and treatment of the insane in our state mental hospitals has received dramatic publicity (13). Typical of the more constructive outcomes of such exposés is the organization of a lively citizens' group in Ohio, The Ohio Mental

Hygiene Association. This organization seems determined to utilize a sympathetic public opinion in order to improve and renovate the state mental health services. Similar movements are starting in other states. In interesting contrast to the actual conditions in mental hospitals, is the recent publication of the American Psychiatric Association of "Standards for Psychiatric Hospitals and Out-Patient Clinics" (20). The Association has recognized that these standards are presently met by few if any public mental hospitals, but have established them as goals to be achieved if possible within ten years. It is probable however that unless the attitude of the lay public evolves from one of curiosity and morbid interest to one of serious determination with recognition of the necessity for action, these standards will remain goals rather than achievements.

The Future of Mental Hygiene

Having traced a few of these trends in mental hygiene, is it possible to sketch future developments? What is the role of mental hygiene in the postwar period? Psychiatrists have not been backward about telling the public in a forthright and dramatic way about the dangers of a continuing "laissez-faire" attitude (2, 10, 14, 17, 21, 22). They have pointed out that unless the chimera of individual selfishness is forsaken, not only will mental health elude us, but the achievement of peace and international goodwill may become impossible. Various psychiatrists have placed their critical finger on a variety of weaknesses in our mental health habits. The American emphasis on an over-sentimentalized and commercialized "Mother," with resultant emotional immaturity on the part of our younger generation, has been described by Strecker (22). He has shown how this dependency on "Mom" can lead to social irresponsibility, selfishness and physical ineffectiveness, ill health, and low national morale. Chisholm (2) on the other hand, put the emphasis on the training and education of children. He stressed the importance of teaching children how to think logically and rationally, with an appreciation of the basic assumptions which they are making before accepting any hypothesis, theory, belief, or faith. For him the fancies of fairy tales and the dogma of religion can be equally harmful influences on the mental habits of the child. They lead to the habit of unrealistic wishful thinking which has played an important part in causing repeated world wars.

Summary

First, there is a notable tendency for the chief disciplines involved to take stock. Education, for example, has its Harvard Report (3) and its searching essays by Livingstone (11).

Second, in recognizing the challenge, there is a marked tendency for each discipline to regard itself as basic to the whole field of progress in

mental hygiene. This is particularly true of those disciplines which have had active partnership in war affairs (15).

Third, and growing out of the first two, there is a tendency away from specialization in the division-of-labor sense, and towards partnership, co-ordination or overlapping of the several disciplines. Particularly noticeable has been the intimacy of psychiatry and psychology in service mental hygiene and in the development of clinical testing, and of particular promise, the extensive collaboration among social and biological sciences in social medicine. Similarly we find economics, sociology, and psychology coming together in realistic research institutes of industrial relations.

Fourth, totalitarianism has shocked us into a reemphasis upon the individual, the individual self-consciousness, and value of life, as of basic significance to all social services (2). Hence the general search for satisfactory understanding of the psychodynamics of personal development.

Fifth, this emphasis on individual personal life is happily grounded in a heightened social consciousness, stimulated by the world experiences of the past decade. It is certainly to be hoped that the sincere and realistic determination to place social purpose high in the scale of values—a determination that greatly characterizes ex-service personnel—will not be forced by frustration and disillusionment to give way to self-centered individualism. The greatest task of all confronting mental hygiene is probably this one, of keeping alive the conviction that the mental-social disciplines can and must point the way to the good life, and in so doing chart the course of development for the great society.

Sixth, in addition to the general points made above, Stevenson (21) emphasized the following developments:

a. The public mental hospital is suffering serious deterioration, which raises the question whether the system as now constructed can persist.

b. Federal legislation, giving extensive authorization for expenditure of funds under the U. S. Public Health Service, was passed in July, 1946. It provides for training, research, public education, and the initiation of clinical services.

c. A drastic shift is taking place in the field of psychiatric education in order that the general practitioner rather than the specialist in psychiatry may be benefited by the undergraduate curriculum. This means a shift in the focus of teaching from the psychoses to the psychoneuroses.

d. While teamwork between psychiatrist, psychologist, psychiatric social worker, and others had been established in child guidance clinics, it became a pattern widely used in the armed forces and has been carried subsequently into many civilian services, including the public mental hospitals.

e. The Veterans Administration has adopted the team basis of operation and has undertaken professional training on a wider and more seriously conceived basis than has ever existed before. On the other hand, it has not completely solved its inability to give outpatient service to the man disabled in line of duty, altho it is giving considerable service to the veteran whose disability is not service-connected.

f. Group therapy came in for extensive experimentation by psychiatrists, psychologists, and social workers in the armed forces and some of this is being carried over into civilian services. This increased attention made much more evident the diversity of group therapy.

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CHAPTER II

Mental Hygiene in Family Life

HAROLD H. ANDERSON

DURING the past three years there has been a definite trend toward greater emphasis on the environment as a factor in mental hygiene. Examples of this trend may be noted in several areas of family life, in the research relating to nutrition, feeding, and food problems, in the studies which have dealt with many aspects of child care, and in several attempts to investigate the relationship between mental health and general home conditions.

Nutrition and Food Problems

First, consider the studies on nutrition, feeding, and food problems. Spock (42) concluded that the basic cause of feeding problems is the mother's anxiety. The great proportion of feeding problems, he said, begin in the first two years of life. Occasions when feeding may become a problem include the time of the introduction of solid foods in the child's diet, the period after illness when the appetite is slow to return, or at forced weaning from the bottle around one year. Few children, he found, lose their appetites spontaneously after the age of four or five years. Baldwin (3) rated seventy-two children on three aspects of their feeding behavior, appetite, finicalness, and table behavior and compared these ratings with other variables as to physical status, home environment, and the child's personality. MacKenzie (28) discovered that a group of 355 bright elementary-school children had better nutritional status than 357 slow children.

Child Training

Another example of the emphasis on environment as a factor in mental hygiene is the research in several areas of child training. Skinner (40) described his mechanical baby tender; a closed, insulated, crib-size compartment, with heat and humidity controls, and a roller-towel arrangement for a sheet ten yards long, sufficient to last a week. Huschka (25) reported the training in voluntary control of urination in 215 problem children, concluding that dryness before the age of two may be considered premature. Aldrich, Sung, and Knop (1) found a negative correlation between crying and nursing care of newly-born infants: the more care, the less crying. Read (35) arrived at two conclusions of interest to parents. Using the Stogdill-Goddard questionnaire, Read studied the attitudes of parents and compared them with the children's behavior as rated on sixty-seven traits of the Read-Conrad *Abbreviated Behavior Inventory for Nursery School Children*. Child behavior was found unrelated to parents' views

regarding desirable child behavior, but was positively related to liberalism in views on parental control. Prevey (32) reported that among 100 families boys received better training than girls in the use of money. She listed forty-five references. Bunker (10) concluded that children will not participate in sports in later life unless fundamental motor skills and favorable attitudes toward play are established before the high-school years.

Childhood Traits and Mental Health

A number of studies have continued the search for later effects of factors appearing in childhood. Gardner and Goldman (20) studied the preenlistment histories of 500 consecutive unselected sailors confined to disciplinary barracks and of 200 sailors who had never been subjected to disciplinary action in the Navy. Seven factors, in order of their appearance in the disciplinary cases and relatively infrequent in the control group were: broken home, truancy, expelled from school, retarded three or more years in school, persistent enuresis, runaway civilian arrests, and atypical sexuality.

From intensive life histories of twenty-five college women selected because they were typical of a larger group of 100 cases, Roberts and Fleming (38) reported that in every person a nucleus of traits persisted from childhood to adulthood. While some traits fluctuated, there was more persistence than change. Both case studies and statistical analysis showed that personality is related to the kind of relationship existing in the home.

From clinical data in an institution for delinquent boys Church (12) found that success in treatment depended on the quality of the boy's interpersonal experiences in infancy and childhood. In case records of twenty-seven children who later became psychotic, Friedlander (18) discovered in the background of both dementia praecox and psychopathic personality patients parents who had been either extremely rejecting, over-solicitous, or over-protective. She also found extremes in home discipline and friction.

"Only" children in three college freshman classes seemed to Dyer (17) to be as well adjusted as other children; and were found by Banister and Rayden (5) in about equal proportions among groups of "normal" elementary-school children and children referred to the Cambridge, England, Child Guidance Clinic.

Occupational level was not a factor in the maladjustment of 4450 school-aged children, according to Dawson (14); more than half of these cases, coming to several clinics in England, revealed unsettled homes, parental dissatisfaction, and marital unrest. Among six cases of boys eleven to fourteen years of age involved in homicide, Patterson (31) found outstanding characteristics to be mother-attachment and father-hatred.

Family quarrels were also reported by about one-third of several thousand high-school pupils in a study by Punke (34), the main bases of the conflicts being economic matters, social life of the children, and personal habits of the parents.

An outstanding study of parent-child relations is Levy's (26) monograph on maternal overprotection. Levy described the method used in selecting twenty cases for detailed study, the types of overprotection encountered, special problems of the overprotected child, and methods of treatment of child and parent. Wolberg (45) differentiated two types of parental rejection; rejection of a hostile nature, and rejection in the form of neglect. Clothier (13) discussed the treatment of the rejected child, pointing out that guidance clinics use a variety of poorly defined psychotherapeutic technics in attempting to modify "destructive maternal attitudes" affecting the child.

Encouraging to a mental hygiene reviewer are a number of studies attempting to define and measure *positive* family relationships. Baldwin, Kalhorn, and Breese (4) used a combination of clinical and statistical methods and the Champney parent behavior rating scale. Two of three central syndromes were labeled "Democracy in the Home," and "Acceptance of Child." The third was "Indulgence." Seven common patterns of behavior were described in detail with illustrative case material. Another study which illustrates the range of positive approach to family relations is that by Bossard (9) who listed thirteen arguments for the value of owning domestic animals.

Merrill (30) made a direct observational study of the stimulus properties of the mother's behavior toward her preschool child in a standardized play situation. Data in eleven of thirty-two categories were analyzed. Thirty mothers were divided equally into experimental and control groups. At a second session the experimental mothers were given to understand that the child's previous play performance had not realized his capabilities. From first to second sessions the experimental group showed a significant increase in directing, interfering, criticizing, and structurizing-a-change-in-activity types of behavior.

The Henrys (23) studied family attitudes of Pilagá Indians thru the medium of doll play of children.

Dinkel (15) constructed a scale to test attitudes of 1006 college students and 318 high-school students toward supporting aged parents. The obligation to support aged parents was held more strongly by Catholic and rural groups than by Protestant and urban groups, respectively. The degree of hardship affected the attitudes of all groups. Dinkel concluded that the obligation of children to support aged and needy parents is apparently no longer well established in the mores.

Special problems of parents and of children are represented in three studies. Loughlin and Mosenthal (27) discussed personality disturbances in 114 diabetic children. Three-fifths of the children maintained normality in all respects. Price and Putnam (33) illustrated with case histories their discussion of the effect of intrafamily discord on the prognosis of epilepsy. Rheingold (37) summarized factors involved in interpreting mental retardation to parents.

Home Conditions

Research during the past three years as noted earlier has revealed a growing emphasis on the interaction of the individual and his environment. Examples of such approaches are the monograph by Washburn (44) reporting three levels of psychotherapy in the treatment of parents of children enrolled in a nursery school, and reports of group psychotherapy with parents by Amster (2) and by Durkin, Galatzer, and Hirsch (16).

Case records of forty-four children who had at least one alcoholic parent were reviewed by Holden (24) who concluded that treatment is less likely to be successful with this group than with unselected clinic referrals. Roe, Burks, and Mittelman (39) reported on the adult adjustment of foster children whose parents had been alcoholic or psychotic. In a follow-up study of 744 children, seventy-eight who had been placed in foster homes before the age of ten were available for study. Altho one-third of the children showed evidence of various sorts of maladjustment, and altho 40 percent of the foster homes were rated unsatisfactory in emotional background, the children showed later satisfactory adjustment, with few exceptions leading demonstrably useful lives. The authors reported that those whose foster parents loved them as children and were not severe with them seemed to have a better chance of achieving a well-adjusted personality. They added a further note that the high incidence of alcoholism and psychosis reported in the offspring of alcoholics cannot be explained solely on the basis of any specific heredity.

Psychological factors involved in the first sight of the child by prospective adoptive parents were discussed and illustrated with case studies by Bernard (6). Increasing evidence on the adverse effects of institutional life is shown in such studies as that by Goldfarb (22) who had two groups of forty children each. One group included children who had been in an institution from early infancy to about three years; the other group had been in foster homes from early infancy. Except for withdrawal behavior and anxieties related to intrafamily relationships in which foster home children tended to exceed the institutional children, the foster home children tended to show lower incidences of the several kinds of problem behavior included in two checklists. Banister and Rayden (5) reported a strong association between problem children and broken homes, but they suggested that this association may to a considerable extent be due to the psychological effects of instability in the parents.

Housing and Its Effect on Mental Health

The John B. Pierce Foundation supported a series of studies attempting to discover what kinds of houses would better fit the needs of man. Among these, Blum and Candee (7) reported on family behavior, attitudes and possessions. By a very ingenious photographic method they were able to record the design of cubic areas for different common household activities.

How much space does a man need in the morning to put on his Sox? They found the answer, for certain men. But they pointed out that the sum of the "activity envelopes" does not make a home. Remmers and Kerr (36) also worked on the problem of evaluating the home. By means of the American Home Scale they studied the homes of 16,445 eighth-grade children in forty-two cities in twenty states. They reported that as a direct and valid measure of the goodness of living, functional income, and personal factors, the American Home Scale compared favorably with Thorndike's scales.

Children in Wartime

Among the many publications about children in wartime, the few which merit consideration as research were mainly observational studies, the analysis of data from questionnaires, or the tabulation of items in clinical records. Carter (11) summarized and evaluated the methods of studies on attitudes toward war which appeared since 1931. Gardner (20) dealt with five aspects of child health: physical, mental, social, spiritual, and social ill health (delinquency). From a review of some of the literature and a few clinical and court statistics he concluded that the health and behavior of children in the United States had not changed much for the worse since our entrance into the war, except in older adolescent groups. Sontag (41), writing on war and fetal-maternal relationship, suggested that susceptibility to disease in infants may be due to the chemical physiological aspects of severely disturbed maternal emotions. The effects of war, as such, on children have been minimized by such studies as that by Bonte and Musgrove (8), Gardner and Spencer (21), Twente (43), and McClure (29).

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CHAPTER III

Mental Health in Schools and Colleges

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RECENT years have witnessed accelerated attempts at articulation between mental hygiene and the newer curriculums, particularly at the elementary-school level. Child development, learning readiness, mental health, and personality development are now frequently treated as part and parcel of the curriculum, rather than as distinct and separate entities. Some recent municipal and state educational publications read more like mental hygiene outlines than curriculum bulletins. Publications from Indiana (24) and New York City (7) illustrate this trend.

The Mental Health of the Preschool Child

The preschool group figures in many investigations attempting to trace personality deviations in later years. Spock (45) traced behavior problems of later childhood to parent-child tensions growing out of everyday situations in the early years. Kestenberg (26) found that separation of the child from parents early in life is more traumatic than later separation, and usually results in regressive behavior. Goldfarb (17) conducted seven research studies of psychologically deprived children in institutions and found that "the pernicious effects of the early experience persist even in the face of careful placement in selected foster homes, casework supervision, and, in some cases, psychiatric treatment." These well-controlled studies have tremendous implications for the mental health of children.

Child guidance workers have found a direct relationship between school phobias in the young child, confirmed truancy in the older child, and parent-child relationships. Klein (27) concluded that traumatic factors in early childhood, particularly punitive parents, coupled with increased tension at school, were responsible for the development of school phobias, and Edelston (14), working with young hospitalized children, came to a similar conclusion. The latter found that rejection, whether real or neurotic, produced anxieties in the children when they were separated from their parents. Washburn (48) approached the same problem positively and came to the conclusion that the general source of difficulty between parents and young children was the conflict between the child and civilizing influences. In this study, technics for therapy are discussed. All studies agreed that the parent-child relationship is one of the most influential factors in the emotional development of the child, and that the earlier in the life of the child this relationship is disturbed, the more profound and lasting will the personality disturbance be.

The Mental Health of the Elementary-School Child

Integration of elementary education and mental hygiene is well illustrated by a five-year experiment in elementary education in seventy New York City schools, subsequently extended to all the 700 city schools. Loftus and his associates (31) described this program from the standpoint of democratic living, personality growth, emotional security, and other mental hygiene aspects. "Helping Teachers Understand Children" (3), an extensive report by the American Council on Education on the training of teachers is a study of children's personalities as related to education.

Many studies dealing with elementary-school children treat various aspects of personality adjustment. Adams (1) questioned forty-two teachers from different schools about wholesome and unwholesome practices in their schools, and concluded that many practices caused inferiority feelings and fears in children. Sandin (41) conducted a study of promoted and non-promoted pupils, and concluded that nonpromotion was associated with many symptoms of poor adjustment. Lantz (30), using experimental procedures with nine-year-old elementary-school boys, found that experience with success resulted in better subsequent performance and in better personal-social adjustment, while failure served as a depressant, poorer subsequent performance, increased tension, and poor personal-social adjustment. Zander (50) induced frustration in a learning situation of fifth and sixth grade pupils, and determined that frustration causes nonadjustive behavior. Northway (36), utilizing the now popular social acceptability test, found that those falling in the lowest quartile of the test were usually shy, passive, and unliked, or noisy, rebellious, boastful, and likewise unliked.

Special Methods To Aid Adjustment

Various technics are employed for improving the classroom adjustment and mental health of pupils. One of the most widely used of the newer methods is the human relations class. Bullis, O'Malley, and Jastak (9) believe that mental disturbance may be prevented by bringing to the attention of children mental health concepts thru which they may formulate healthful attitudes. The method consists of classroom discussions on such topics as fear, tolerance, teamwork, emotional conflicts, and the like, using stories, books, newspapers, and other media. The social acceptability test is frequently used in connection with these classes, and the authors used it not only for determining social relationships in the classroom, but also for clues as to methods of influencing behavior and opinions among pupils.

The psychodrama continues to be used as a therapeutic device. Shoobs (42) found that this method served to decrease truancy and other antisocial behavior, and recommended it for personality and character development.

Flory, Alden, and Simmons (16), studying fourth-grade pupils with the California Personality Test, found that those who fell in the lowest quartile improved their scores to the median after one or two years when informa-

tion about these children was supplied to their teachers with the suggestion that they use their own devices for better personality development. Beckmann (6) used psychiatric observation technics to determine the nature of children in three "opportunity" classes for problem children. He found that the nine-twelve-year group suffered from primary behavior disorders; the ten-fourteen-year group showed a large proportion of neuroses; while in the twelve-fifteen-year group, delinquency and neurotic delinquency predominated. He also found that neurotic and delinquent behavior patterns were reduced by enriching life experiences.

Information about Problem Children

Wallin (47) obtained information from 145 teachers coming from 124 schools in twenty-five states about the availability of psychological or psychiatric services for school children and found the picture very discouraging. He concluded that almost no progress had been made in this direction in thirteen years. He recommended that teacher training in mental hygiene and child development be utilized to compensate for this lack. Cummings (11), studying emotional symptoms in young school children, concluded that overprotected children show "nervous" difficulties, while neglected children show more aggressive behavior, together with cruelty, lying, and stealing. Roe, Burks, and Mittleman (39) have made one of the most elaborate long-term follow-up studies of children and their conclusions have important implications for mental hygiene. Following up children of alcoholic and psychotic parents more than twenty years after foster home placement, they found that not a single child of psychotic parents became psychotic, and not one child of alcoholic parents was alcoholic. Practically all of them were leading useful lives, altho there was evidence of emotional disturbance among 30 percent. Personality adjustment was directly related to love and lack of severity in the foster home.

Mental Hygiene in the Secondary School

The mental health of adolescence has received extended treatment by psychologists, educators, and social scientists in two compendiums (8, 35) devoted to results of findings on this age group. Much of the research on adolescence concerned itself with methods of study and with aids in the classroom.

Methods of Studying Mental Hygiene Problems in School

Jones (25), in a longitudinal research study, presented a detailed treatment of a boy over a seven-year period, beginning at age eleven. He was one of 200 children studied at the Institute of Child Welfare, and is interesting not only for the method employed to study personality, but also for the illustration of the growth process and the problems of adolescence.

A very different approach was used by Mooney (32), who employed a checklist in a study of community differences in problems of adolescence.

Several reports containing suggestions to teachers for studying children were presented. Alsop (2) suggested the application of the Army methods for recognizing and helping psychoneurotic students. Roody (40) proposed the use of the Plot Completion Test for the same purpose. This test constitutes a framework from which attitudes are determined, as well as a basis for discussions in modifying attitudes. Kuhlen and Lee (28) studied social acceptability in grades six, nine, and twelve, and demonstrated the use of a social acceptability scale and a "Guess Who" test as measures of personality. Smith (43), in a study of 103 high-school students, used factors in the selection of friends, and concluded that friendship is a form of ego satisfaction.

Studies of maladjustment include that of Demerath (12) on the experiences and characteristics of twenty adolescent schizophrenics, and that of Wittman and Huffman (49), on the characteristics of psychotic, psychoneurotic, delinquent, and normally adjusted adolescents. Kvaraceus (29), from a study of 761 delinquents, mostly in grades six to ten, concluded that frustrating experiences within the school are a major cause of delinquency, and outlined what the school can do about curriculum, teacher training, child study, special services, and community cooperation, in developing a mental hygiene program.

Aids in the Classroom

Attempts to implement mental hygiene findings in high-school programs are found in guides to teachers as well as in experimental programs. Crow and Crow (10) described specific mental hygiene technics and materials for use in schools, and presented seventy case histories of adolescent boys and girls. These authors, among others, have also written a high-school text in psychology to help student adjustment. One of a series of resource units for high-school use in the mental hygiene of racial and cultural conflict is that of Powdermaker and Storen (37). Hellerstein (20) experimented with various "Adjustment Group" programs for failing students in the regular classes of the junior high school. Removal of pressure, lessening of competition, diagnostic study, an individualized sympathetic approach, and modified teaching methods, employed over a period of one year, decreased failure and discipline problems, and increased achievement.

The problems of freedom and authority were treated by Hacker and Geleerd (18), who found that disturbed adolescents showed better results when not given unlimited freedom. This has implications for education, and is in line with the findings of Lewin and Lippitt on the destructive effects of both the autocratic and anarchic groups, as compared with the wholesome effects of the democratically organized group.

Mental Hygiene in College

Altho numerous studies of college students have been reported in recent years, most of them can be classified in a few categories. Typical of elaborate studies of "normal" students is that of Heath (19), in which the clinical approach was utilized to obtain psychiatric, anthropometric, medical, psychological, and sociometric data. Another group of studies, typified by that of Houston and Marzolf (22), used a personality or problem checklist, usually Mooney's, to determine which students required special assistance in personality or emotional adjustment. The clinical approach to the study of college students by psychiatrists and psychologists has become more widespread. Murphy and Ladd (34) reported an extensive investigation, at Sarah Lawrence College, by the case study method, of common adjustment problems of students, emphasizing particularly the role of emotional factors in learning at college. Munroe (33) continuing her studies with the Rorschach Inspection Technic at the same institution, found the Rorschach Adjustment Rating, which is a measure of personality integration, to correlate well with teachers' observations and with later adjustments of the students. These ratings predicted academic failure better than did the American Council Psychological Examination scores. Fischer (15), using tests of frustration, measures of personality, grades and intelligence level, confirmed the findings of many studies that emotional factors exert a strong influence on failure to achieve scholastically. Hill (21), working with college freshmen who were relatively inactive in extracurriculum activities, demonstrated the value of individual counseling for social adjustment, when, after a year, the experimental group was active in greater numbers than a control group that had not been treated in this way.

Mental Hygiene and Teaching

Many writers clamor for the selection of teachers with "wholesome" and "well-adjusted" personalities, but very few do very much about selecting such personalities. Research in this area deals principally with methods of changing teachers after they have been selected. Di Michael (13) showed that a course in educational guidance did not change the attitudes of experienced teachers toward children's behavior problems, while a course in mental hygiene did. Baruch (5) demonstrated that teachers and teachers-in-training, after receiving training in the acceptance of children's and parents' emotional problems, showed great improvement in the acceptance of such problems; such improvement was generally related to the teacher's personal adjustment. Symonds (46) found that teachers solve their problems fortuitously, and that aid from another person would have helped them solve their personal problems more promptly and surely. Retan (38) found that, altho students judged emotionally unstable are less likely to be rated good teachers later than are those formerly rated as stable, many of the unstable ones nevertheless become good teachers later; therefore,

studies of emotional stability among prospective teachers should be used to aid them in their adjustment rather than for their elimination.

Comprehensive Reports

Altho numerous comprehensive reports of mental hygiene research studies have appeared in recent years, only three will be mentioned. Snyder (44) evaluated the literature on mental hygiene at the various school levels; Barker, Kounin and Wright (4) republished thirty-five studies selected as significant by a poll of experts; and Hunt (23) edited thirty-five representative research reports on personality and behavior disorders to form a basic handbook. These and similar encyclopedic volumes, of which there have been many, now make available research material formerly obtained only after painful search thru periodical literature.

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CHAPTER IV

Mental Health in Community Life

RALPH H. OJEMANN

SINCE the period under review covers the close of the war and the first postwar year, we find the problems of readjustment, rehabilitation, the effect of the war, and delinquency claiming a considerable share of research workers' time. Particular emphasis has been placed on studies of the effect of government and political systems on mental health and adjustment.

Effects of Forms of Government and Political Systems

Leighton, Spicer, and others (32) in an interesting article pointed out how basic knowledge concerning human behavior and motivation can be incorporated in plans of government and public administration. In a more extensive study, Leighton (31) applied the analysis of human behavior to the administration of the Poston Japanese Relocation Center in Arizona. He analyzed the discontent which was appearing in the community at the time the study was undertaken and then proceeded to show how, from the factors underlying behavior, a program of administration was developed which met the needs of the members of the community more adequately. The findings of this study are not only applicable to relocation centers but have great import for all forms of administration.

Several studies of the Nazi system appeared during the period under review. Abel (1) suggested several approaches to the analysis and understanding of German conduct. Wittenberg (47) described the problem of understanding children reared under the Nazi system. The development of the Nazi parent relates back to World War I when they were in their childhood, and their children in turn developed during their adolescent period under the Hitler regime. With a background of such experiences, present day Hitler youth are quite different and present a difficult problem for clinical diagnosis and reeducation.

That nonadaptive political attitudes may lead to serious mental difficulties has been proposed by Appel (3). He drew a parallel between isolationism and schizophrenic withdrawal from reality. Some interesting hypotheses as to the effect of mental deficiencies in rulers upon political systems were given by Norman (39).

Effect of Socio-Economic and Class Status

The effect of social stratification was studied by Cattell (11), Tumin (43), Carroll (10), Saenger (41), Humphrey (21) and Jones (23). Cattell has suggested that stratification and mobility may be a source of stress or a form of adaptation depending upon how it is used and the individual's attitude toward it.

Tumin (43) gave an account of an Indian in an Eastern Guatemalan pueblo who rejected the social convention of marrying within his group and married a daughter of the landowner and privileged class. Altho he was apparently an intelligent individual, he was accepted by neither group. He represented what the lower group desired and what the upper group feared—an attempt to secure equality between the two.

Carroll (10) in a study of concepts concerning lying, stealing, and cheating of 300 Negro boys and girls in an eastern section of Baltimore, found that the middle-class children disapproved of cheating, lying, and stealing mainly for altruistic or social reasons while the lower-class children tended to express their disapproval from a materialistic or nonsocial point of view. The middle-class children selected more successful adults as their ideal, whereas the lower-class children chose more glamorous adults. The movies seemed to play a very large role in forming concepts of "the ideal self."

An analysis of the relation of sociological status, as determined by income and religion, to political behavior was reported by Saenger (41). In a study of the voting trend in New York City over a period of several years, he found that differences in religion appeared to be more important than educational differences in determining the extent of political awareness. Furthermore, the decision to change parties was not closely related to an awareness of the differences between two parties. Group membership seemed more important than party platform. When the voter's opinion conflicted with the established party line, the party program was often interpreted in terms of the individual's own desires and beliefs.

Humphrey (21) compared the caste concept and race concept as to their relative usefulness in understanding Negro-White relations and concluded that the caste concept is the more useful since it expresses the socio-cultural data more accurately than does race.

In the Negro population of South Boston, Virginia, Jones (23) found a well-defined upper and lower class but no social group that could be called a middle-class. In its place was an amorphous group of individuals who were, for the most part, the more energetic and ambitious elements of the community. Competition for status was based more upon personal worth than one's family.

An extensive discussion of the effect of class differences on problems of education was given by Warner, Havighurst, and Loeb (44).

Mental Health in Different Cultures

A number of interesting studies comparing different cultures have appeared during the period under consideration. These included two investigations of Japanese culture. LaBarre (30) studied the Japanese internees at the Central Utah War Relocation Project. He described the Japanese personality as highly compulsive; and characterized by secretiveness, hiding of emotions, persistence, and a tendency to project its attitudes.

Kuhlen (28) obtained Pressey interest-attitude scores from 1589 Japa-

nese and 690 Chinese high-school students at the McKinley High School in Hawaii and compared the results with similar data from 1547 white children of comparable age and grade level in the United States. Analysis of the scores, based on American norms, revealed the Orientals to be relatively immature on the tests dealing with disapprovals and worries, but about equivalent to the whites on the interest scores. The Orientals tended to check worries about twice as frequently as the whites. The author suggested that this may be an indication of the emotional stress accompanying the acculturation process.

Whiting (45) in his study of the reaction of the Kwoma to frustration found that in the play group, which the child entered at the age of five or six, aggression led to retaliation by a person bigger and stronger, and submission became the most adaptive and usual response. Aggression toward younger siblings, unless it resulted in bodily injury, was approved by the child's parents.

Hsu (19) suggested that the incentive to work in primitive communities is essentially the same as that in modern communities; namely, self-interest. He felt there has been a tendency to exaggerate the differences between incentives, especially economic incentives, in primitive and modern communities. Beard (4) presented an interesting summary of child guidance in Mexico. The study of individual delinquents is being developed and methods for their rehabilitation are being improved.

Humphrey (20) investigated the extent to which the stereotype of Mexican-American youth; namely, "law-breaking zoot-suiter," corresponded to the actual behavior of Mexican youths in Detroit. The actual behavior varied greatly and it was evident from the different groups studied that stereotypes do not describe the situation very adequately.

Two studies, Pullias (40) and Kramer (27), pointed out some mental effects of western civilization.

Sectional Differences

Several interesting studies on sectional differences have appeared. Mooney (35) described some of the differences found among five Louisiana communities in the personal problems of secondary-school students. He used a checklist of 330 problems common to high-school students. Goodwin (15) studied the eastern shore of Maryland as an example of good personal adjustment in small stable communities. He suggested that the slow rate of change, traditionally clear definitions of relationships within the community, and the accessibility of the prerequisites for personal recognition are the factors which produce the favorable adjustment.

Mull, Keddy, and Koonce (37) administered the Bernreuter Personality Inventory to forty definitely northern and forty definitely southern college girls. No reliable differences in average scores for the two groups were obtained altho some evidence of less neuroticism, less self-sufficiency, and more sociability was found among the southern group. In another study,

Woodruff and Mull (49) used the Bell Adjustment Inventory for thirty-one southern freshman students and thirty-one northern freshman students at Sweet Briar College. Few differences were found.

James and Moore (22) obtained weekend diaries from 535 adolescents and analyzed the leisure-time activities. Saturday and Sunday activities were much more given to pleasure and were much more sexual in nature than weekday activities. They suggested that the conditions under which these adolescents lived tended to discourage the development of purposiveness and responsibility.

Drake and Cayton (14) presented an extended documental social history of the Chicago south-side Negro district and described the variety of problems presented by the Negro-White relations in this crowded urban section.

In a study of the factors responsible for the relatively lower personality ratings of rural children in comparison with urban children, Stott (42) found that in the nonfarm group occupational status was related to adjustment. Children of the common laborer class scored lowest. A factor important for all groups was quality of family life. Farm children attending village schools scored high in self-adjustment.

Effect of War

During this period a relatively large number of studies on the effect of war both in this country and abroad on various aspects of mental health appeared. A review of the literature with special reference to the present war was provided by Despert (13). Studies of the effect of war on mental health in England were made by Mackintosh (34) and Jones (24). Jones reported an increase in juvenile delinquency during the war of 57 percent in the community which he studied. Other studies of delinquency rates in wartime were reported by Burt (9), Chute (12), and Killian (25).

Community Planning for Rehabilitation and Readjustment

As the war drew to its close, interest in the development of community programs for rehabilitation and readjustment to civilian life of both citizens and veterans increased. This increase in interest was reflected in the appearance of a large number of articles, pamphlets, and books on counseling the veteran. An extensive bibliography of these references is provided by Klopff (26).

An extensive analysis of the causes of current crises and suggestions for intelligent planning for the future, based on knowledge from a variety of disciplines, was given by twenty-two contributors in a book edited by Linton (33).

Delinquency and Community Factors

Some interesting light on the relation of delinquency to economic trends was provided in studies by Wood (48), Bogen (6) and Wiers (46). Wood

studied the crime rates of seven Wisconsin cities and villages ranging between 1000 and 2000 population. Of twenty-four indexes which were correlated with crime rate, four were significant and three of these were indexes of economic prosperity. He concluded that incidence of crime in these communities is more closely related to the prosperity of these communities than to the kind of enterprise involved or to various demographic classifications. Bogen (6) reported from his study of juvenile delinquency in Los Angeles a strong tendency for delinquency to decrease during depression and to rise during prosperity. He proposed as an explanation of this finding the relaxation of parental guidance and tendency toward family disorganization during times of prosperity. Wiers (46) also noted a relation between delinquency and level of economic activity.

During the period under review, there was considerable interest in community programs for the treatment and prevention of delinquency (2, 5, 7, 16, 17, 18, 36, 38).

Further data on incidence of delinquency in various age groups was provided by Burrows (8) who also described a comprehensive program involving the entire community, and by Kvaraceus (29).

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CHAPTER V

Mental Hygiene, Health, and Safety in Industry

LYDIA G. GIBERSON

POSSIBLY as a by-product of the war, the period 1943-46 produced much literature in psychology and related fields. But probably no period has been less critical of the material published. Much of that which has been printed consists of rewrites of previous literature.

Particularly has this been true in the field of industrial mental hygiene where there is a paucity of basic material. In this field, substantial research is needed far more than the printed word. Currently the need is for contributors who have gone thru the hard treadmill of training and who subsequently have applied that training against a background of working conditions.

Mental Hygiene Services in Industry

When national effort is required as in a war, national health, both physical and mental, immediately becomes of paramount importance. Unfortunately when the war is won, the promotion of national health generally declines. Too often in our history the nation has taken the attitude "billions for defense, pennies for health." As a result, the important strides in medical research and medical development have occurred during war periods. The recent war was no exception.

As the manpower of the nation was siphoned off for military duty, medical programs in industry developed. Most of the programs had as their prime objective prevention of physical or mental disease. This new concept of industrial psychiatry as a form of preventive industrial medicine was pointed out by Giberson (22). Many mental hygiene programs were developed during the war period. Those in larger companies, such as Dupont and General Motors, were described by Dersheimer (12), Irvin (30), and Eadie (13) and the program at Oak Ridge, Tennessee, by Leggo, Law, and Clarke (35). Sometimes the psychiatrist was a member of the medical staff of the company and accepted as a fellow employee. At Sperry Gyroscope the psychiatrist was a consultant, outside the plant, and consequently the viewpoint was somewhat different (7).

During the war years many universities developed refresher courses in industrial medicine. Most universities tried to give some reference to the mental hygiene aspect and some papers were developed, as shown by Kindred (32), Potter (47), Howe (28), Coonley (11), and Kennedy (31). Many of the programs in mental hygiene are being continued as an integral part of the general medical program, rather than a specialty functioning separately.

Placement and Adjustments of Handicapped Persons

A step in the right direction during the war years was the change in attitude toward hiring physically and emotionally handicapped people, and the utilization of older people as shown by Stieglitz (55). On actual performance it was found that the so-called handicapped employees lost less time, had fewer accidents, showed more interest in their work, and had higher production records than the average employee. Slowly management and industrial medical groups have recognized that *proper placement* of individuals really determines whether an employee is handicapped or not.

Harvey and Luongo (25) studied the field of physical capacity for work. Wittmer (65) discussed the problem of a more wholesome attitude in the employment of emotionally and physically handicapped persons. An exceptionally thoro survey has been made by the Industrial Hygiene Foundation (29) covering the employment of the disabled veteran. Hostetler's (27) article on vocational training and placement of the veteran is well worth reading. Finally, and most important, management itself is beginning to realize its responsibility in this whole field as shown by Barrett (3).

Research in the Armed Forces Applicable to Industry

The wealth of work done by the armed services has not been lost but its correlation with industry's problem continues to be a necessary and intriguing task, undoubtedly due to the difference in the underlying psychology of a nation at war and a nation at peace. The literature covered every phase of normal and abnormal reaction thru the period from civilian to veteran and back to civilian. Good examples are studies by Strecker and Appel (56), Grinker and Spiegel (24), Menninger (39), Rusk (49), Freedman (17), and Solomon and Yakoviev (54).

Mira (41) gave a preview of the pattern set, as seen in the Spanish War. Many pamphlets were written about the veteran for the employer, the family, the community. Few were written to guide the soldier himself. One of the best was an Air Forces manual (59). Doubtless, as time permits, more and more industries will adopt technics and procedures that were worked out in the services on a large scale. One of the best articles published on the whole psychiatric toll of warfare appeared in *Fortune Magazine* (16).

Women in Industry

Journals have had many articles based on the problems of women in industry. Numerous phases have been covered, many of them dealing with the differences between men and women workers, in time lost, abilities, and needs. Anderson (2) discussed the protection for industrial women, with emphasis on progress and prospects, while Kronenberg (34) discussed working conditions. Wishard (63) and Burnell (8) presented workable

health programs for women. Heyel (26) summed up the consensus in the field from the mental hygiene viewpoint.

Job Satisfaction and Dissatisfaction

Job satisfaction and dissatisfaction cannot be considered entirely as a personnel function in the narrow sense. Personal relationships in industry probably have more impact on health, certainly on mental health, than most people realize. Union activities (58), supervision (38), and interpersonal relations (33) are interrelated with job satisfaction or dissatisfaction and health. The Symposium on Industrial Health (10), Smith (53), and Woodward and Rennie (66) deserve attention.

Absenteeism

In Great Britain an excellent piece of research work was done by the Industrial Health Research Board on the problem of sickness among women in industry (23). A comparable job has been done by Gafafer (19). In his Public Health reports (20) on disabling sickness he studied both time lost and frequency of short-term absences. Fatigue is closely allied with absenteeism, regardless of whether the fatigue is physiological or psychological, according to Fetterman (14), Flinn (15), and Simonson (52). Wittmer (64), Woody (67), and Tallman (57) discussed the general medical aspect of absenteeism in industry and its probable control.

Health and Safety Programs

The doctor, nurse, and safety engineer have always been the trio considered necessary to furnish industry with an efficient health and safety program. But without the proper participation of labor and management, no program can be a success. A good cross section of this literature has been given by Bloomfield (4), Cameron (9), New York Academy of Medicine (43), Price (48), Sappington (50), Selby and Lutz (51), Owen (44), Newquist (42), and Perkins (46).

Summary

Most of the articles reviewed for this chapter were recitals of experience, with some directional trends of the present pointing to a better understanding on the part of the general public, the medical profession as a whole, and above all by business leaders, that good mental health is essential to production, to safety, and to life itself. Unfortunately, much of the literature in the past three years has been aimless or directed toward one small area of thinking in one particular phase. The next three years will probably see the launching of many research projects in this field with actual data gathered.

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CHAPTER VI

Experimental Contributions to Mental Hygiene

LAURANCE F. SHAFFER

FROM the earliest days of educational psychology, experiments performed under controlled conditions in the laboratory have contributed to the understanding of behavior. Experiments with lower animals have been the source of many principles that are directly applicable to the education of human beings.

During the past twenty years, an increasing number of experimental studies have been made of abnormal behavior in animals that throw light on human problems of conflict, frustration, aggression, maladjustment, and mental hygiene. An advantage of all infrahuman experiments is that a greater degree of control can be exercised over the total life of the animal than would be wise to exert upon a human being. This control clarifies the pertinent variables of many experiments. Studies of artificially induced abnormal behavior especially demand the use of lower animals since harmful effects may result. The applicability of concepts originating from animal experiments can be confirmed by comparing them to the findings obtained in the clinical study of persons who show deviations of behavior.

This is the first summary of experimental studies of abnormal behavior in the *REVIEW OF EDUCATIONAL RESEARCH*, altho Sears (21) referred to a few such researches in his article on personality and motivation, along with other material drawn from theoretical, clinical, and anthropological sources. During the three-year period covered by this review fewer studies have been reported than in a like time immediately preceding, probably because many workers in this area have been occupied with war services. The small number of new references is offset by the publication of a number of summaries (5, 6, 10, 17, 20, 22, 23), and especially by the full reports of two programs of long-term research, those of Gantt (7) and Masserman (13, 15).

Behavior Disorders Induced by the Conditioned Response Method

The first so-called "experimental neuroses" were reported by Pavlov (18). Dogs, placed in the restraining harness used in conditioned reaction experiments, were trained to respond by salivation to one stimulus and to inhibit response to another stimulus. When the difference between these stimuli became too small to be discriminated, certain dogs "broke down" and showed generally disturbed behavior. Only a minority of animals became abnormal, however, and their reactions were not all alike. Previously timid and inhibited dogs tended to become agitated, to show excessive activity, to bite the apparatus, and to act aggressively toward the experi-

menter. Originally active dogs tended toward generalized inhibition, maintaining set postures or going to sleep in the apparatus. Russian laboratories secured similar results in a few experiments with children, which were summarized by Razran (19).

Experimental neuroses in sheep, goats, and pigs were described by Liddell (10). The method was generally similar to that of Pavlov, except that the response conditioned was that of leg withdrawal to a weak electric shock. The stimuli to be discriminated were usually auditory, including tones and different rates of a metronome. Liddell placed certain interpretations on his experiments that are particularly applicable to human affairs. The dependent and trustful relationship of a domestic animal to the experimenter was held to be a significant factor in precipitating breakdown when faced with an impossible task. The restraint imposed by the apparatus also was a traumatic experience in that it prevented the animal from making substitutive or diverting responses that might have prevented the neurosis. Sheep conditioned in a small pen without bodily restraint could not be "broken down." Other evidence has confirmed the part played by restraint. Bijou (2) induced experimental neurosis in rats only by the use of a close-fitting cage, and found that the excited behavior was more pronounced when the rats' legs were restricted as well. Marcuse and Moore (12), however, obtained tantrum behavior in a pig when an accustomed restraint was removed, and suggested that a change in the degree of freedom was the determining factor.

Liddell found that sheep made neurotic by the experiments showed abnormal behavior outside of the laboratory. One sheep continued "neurotic" until its death at the age of thirteen years. Vacations from the laboratory, petting by the experimenter, and the use of sedatives had some effect, but no methods of treatment were very satisfactory.

James (9) induced abnormal behavior in another way by placing a weight on a dog's leg which made it more difficult for him to perform a conditioned avoidance response set up by an electric shock to the foot. Two animals were used. The initially more excitable dog showed a gradual development of hyperactive behavior. The more stable dog showed more evidence of physiological stress (heart rate) and finally "broke down" suddenly.

A twelve-year program of research on neurotic behavior in the Pavlovian Laboratory of the Phipps Psychiatric Clinic was reported by Gantt (7). Observations were made on a considerable number of dogs, but emphasis was given to the case histories of three animals whose degree of stability varied, especially to the unstable dog Nick who was neurotic for ten of the twelve years of observation. Observations of the induction of behavior disturbances by excessively fine discrimination, and of the resulting abnormal reactions, confirmed the Pavlovian experiments. After a behavior disorder had been set up to one stimulus, a tone, a few associations of the tone with a light stimulus sufficed to make the light produce the same state. This is related to the readiness with which human neurotics can transfer

their anxiety to situations even slightly associated with the basic conflict. Elaborate measurements were made of autonomic functions of the dogs while being subjected to the experimental stress, including recording of glandular, heart, breathing, and sexual reactions. It was found that incipient disturbance could be detected in these functions before it was evidenced in overt behavior. This may lead to methods of value in predicting breakdowns.

Gantt made detailed studies of the generalization of neurotic behavior in the life of the dogs outside of the laboratory, and of its effect on social relationships with other dogs and with humans. In susceptibility to breakdown, dogs could be classified along a continuum from very stable to very labile, but the differences between excitatory and inhibitory types found by Pavlov were not confirmed. No final conclusions were drawn as to whether susceptibility was constitutional, or was due to the dogs' early experiences, but the labile animals tended to be more fawningly dependent on humans and more submissive to other dogs. This observation seems to confirm clinical studies of maladjusted children.

Studies of Conflict in Cats

Masserman (13, 15) studied cats' responses to conflict by a technic that permitted a greater variety of observations and more direct application to human affairs than did the conditioned reaction method. Cats were trained to raise the lid of a food box and to eat, upon the presentation of a light and sound signal. Conflict was then produced by subjecting the cats to a strong air blast or to an electric shock, or both, at the moment of feeding. The feeding response was abolished, and the cats showed additional general symptoms of: (a) anxiety in and out of the experimental situation, evidenced by trembling, crouching, mewing, and disturbances of heart rate and respiration; (b) avoidance or "phobic" reactions to food, to the apparatus, and to symbols associated with the experiment; and (c) defensive or substitutive behavior including excessive preening, seeking of attention from the experimenter, and aggressive acts toward other animals. Control observations showed that cats readily adapted to the light and sound stimuli alone, and to the air blast when it was not given during feeding. The latter observation was in contrast to the findings with rats, discussed below.

Masserman made a valuable distinction between frustration and conflict. When trained cats were merely frustrated by locking the food box or by placing them behind a glass partition, they adapted readily to the external frustration and in a short time came to pay no attention to the light and sound signals. None developed neurosis under these conditions. The essential requirement for the induction of abnormal behavior was held to be the conflict of strongly motivated antagonistic responses of seeking and avoiding.

Altho there were individual differences in susceptibility, cats as a species were found to be labile, so that all animals were disturbed by the very effective method used. The neurosis was aggravated by an increase of

one of the conflictual drives, as by increasing the hunger or the intensity of the electric shock. It was also accentuated by pushing the neurotic animal toward the food box, the locus of his conflict, by a movable barrier.

Masserman reported more specifically planned studies of the treatment of the artificially induced neurosis than have other experimenters. Rest and absence from the conflictual situation were of little or no therapeutic value. The reduction of one of the conflicting drives (hunger) had a temporary effect, but the neurotic behavior returned when the motive was again strong. A few cats were "cured" by the social example of a normal cat placed simultaneously in the box, but this was not a dependable method of treatment. A procedure of moderate value was treatment by "transference," defined as stroking, petting, reassurance and hand-feeding performed by the experimenter. This helped some animals, but was inapplicable to cats who had come to fear the experimenter in the course of their training.

Two generally effective methods of treatment were found. One was the forced solution of the conflict by environmental manipulation. The hunger drive was increased by food deprivation and by unusually tempting morsels in the food box, and the movable barrier was used to keep the animal near the feeding position. At first anxiety was greatly increased, but at length most animals broke thru their inhibition and fed. After numerous repetitions of this sequence, the neurotic behavior was replaced by almost-normal feeding, usually with some residual hesitation and timidity. Even more effective was the technic of treatment involving giving control of the experimental situation to the animal subject. Cats for whom this method was used had been taught to press a switch, giving the feeding signals, and thereby to feed themselves. Animals trained in this self-initiated act were less easily made neurotic by conflict than were other cats. When, after the formation of neurosis, they were induced by hunger and proximity to depress the switch again, they "worked thru" the conflict and usually showed marked and permanent improvement. Masserman noted that these two most effective means of treatment involved the greatest amount of spontaneous readaptation on the part of the animal. There are obvious implications favoring the client-centered attitude and the use of nondirective counseling technics that have recently come into prominence in the treatment of human personality disorders.

Other experiments reported by Masserman and his colleagues (14, 16) were concerned with the relationships between neurosis and the social phenomena of dominance and aggression. Sixteen cats were trained to respond to the food signals in the box used for the experiments already cited. They were then combined in groups of four, and hierarchies of dominance were determined for each group. In each group, the most dominant cat, A, would push aside B, C, or D to gain the food. Cat B would be submissive to A, but dominant over C or D, and so on to D who was submissive to all three of the others. Except for some pushing and crowding at the food box, no fighting or other aggression occurred. The less dominant cat waited quietly until the more dominant one was satiated. Further observations in-

volved the pairing of cats each of whom had previously been dominant, and the induction of experimental neurosis in some of the cats. It was found that "aggressive behavior did not appear in a dominant animal until it had been displaced downward in rank, either by competition with a more dominant cat, or by the development of neurotic inhibition induced by a motivational conflict." (16, p. 15). The aggressiveness diminished or disappeared when the relative dominance was restored, as by the cure of the neurosis. These findings have applications to the understanding of aggressive behavior both in individuals and in social groups.

Studies of Seizure States

The experiments of Maier (11) first called widespread attention to a behavior disorder of a very severe type that can be induced in rats. The abnormal response, quite different from the patterns of anxiety and agitation already cited, started with wild leaps and dashes about the room, followed by a convulsive state with spasms of contraction and relaxation of muscles, and ended in a passive phase during which the rat was inert, could be handled without resistance, and could be "molded" into any posture. In his original experiments, Maier confronted the rats with unsolvable discriminations. When they refused to react, he "motivated" them with a strong air blast to compel a response. Subsequent research soon showed that the abnormal behavior pattern could be evoked *by the air blast alone*, without a discrimination conflict. Intense and high pitched sounds elicited the seizure in susceptible rats. The phenomenon has come to be termed "audiogenic seizure," and is believed to be distinct from experimental neurosis.

Altho the seizure states of rats have little direct applicability to human adjustment problems, they are of considerable interest in themselves. The literature to 1944 has been summarized by Finger (5). Age, dietary deficiencies, and some drugs are related to susceptibility to seizure. Restraint of the rat alleviates seizures, an effect opposite to that of the true experimental neurosis. Studies of the effect of heredity have not yet been conclusive.

Arnold (1) found that strychnine injections made previously unresponding rats susceptible, and increased the frequency of seizures in previously susceptible ones. From these data, it was argued that there is a continuum of susceptibility from the least to the most susceptible animals, without any distinct classes or types. By observing behavior in nonattack trials, Arnold also reported that normal animals tended to show manipulatory and exploratory behavior that formed a defensive reaction against the disturbing situation, while susceptible animals showed mainly involuntary activities of tremor, twitching, and lip-wetting that were not constructive defenses. Hamilton (8), in studying the effects of sodium bromide administered to mother rats upon the behavior of their offspring, found that the bromide groups were less timid in ordinarily frustrating situations such as having

to wade thru water, but were more susceptible to audiogenic seizures. These and other studies continue to show some relationship between the seizure states and other aspects of emotionality.

Some controversies about the seizure states have continued into the present triennium. Bitterman (3) argued that all personality disorders are conflictual, and that the seizures in rats are due to a conflict between their tendency to avoid the sound, and also to avoid the walls or barriers that prevent their escape from it. Finger (4) has replied by pointing out that the peculiar behavior of the seizure has been evoked only by the auditory stimulus, never by the numerous other difficulties and conflicts to which rats have been subjected. The bulk of the evidence seems to favor the interpretation that the seizures are not due to conflict, and that they are basically different in character from animal or human neuroses.

Interpretations and Applications

The studies of artificial behavior disorders in animals form an indispensable basis for understanding mental hygiene. They have shown that a conflict between approach and avoidance (13) or between excitation and inhibition (7, 18) may cause anxiety, hyperactivity, and substitutive behavior. Conflicts of this type are represented in many human situations, such as that of a child with a rejecting mother. An early conflict may have life-long neurotic sequels if not successfully treated (7). It involves many glandular, circulatory, and other reactions of the autonomic system (7, 10). Neurotic behavior is prevented by freedom and by overt activity (1, 10), but is made more likely by undue dependence and restraint (2, 10). The most effective treatment of neurotic conditions involves a maximum of self-directed readaptation on the part of the individual (13, 15). Neurosis has significance beyond the welfare of single persons, as it is related to the social phenomena of dominance and aggression (14, 16). An unsolved problem of great importance is that of variation in susceptibility to neurosis, toward which animal experiments may be expected to make future contributions.

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CHAPTER VII

Methods, Technics, and Instruments of Mental Hygiene Diagnosis and Therapy

RUTH STRANG

THE increasing scope and malignancy of psychoses in the world today demand more widespread and effective diagnoses and therapy. During the last three years progress has been made in meeting this need by providing more adequate training for psychiatrists, by enlisting more fully the services of psychologists, by establishing a closer relationship between psychiatry and other fields of medicine, and by developing methods of group therapy. Thus the kind of differentiated treatment appropriate for each individual can be determined more rapidly; the treatment process itself may be reduced in length; and the behavior, attitude, and motivation of groups influenced in the same amount of time that a therapist might spend on an individual case.

Since progress in this field is made not only by the experimental method, but also by the formulation of theories and explanations growing out of clinical observations and experience, articles of both types are included in the bibliography. This chapter overlaps to some extent with Chapter III in this issue and with chapters in other issues of the REVIEW: *Psychological Tests and Their Uses*, (Volume 14, No. 1) February 1944; and *Counseling, Guidance, and Personnel Work*, (Volume 15, No. 2) April 1945.

Clinical Application of Psychological Tests

One of the most significant developments in this three-year period is the statistical study and evaluation of the clinical use of tests previously administered chiefly for their total score. The most outstanding contribution to this development of psychological testing to facilitate psychiatric service has been made by Rapaport and his associates (46). Rapaport first selected a battery of tests chosen to evoke different aspects and levels of functioning: tests yielding ideational content, tests of intelligence and learning efficiency, tests of concept formation, and tests that reveal personality structure. The following eight tests were "welded into a single diagnostic tool": Wechsler-Bellevue Adult and Adolescent Intelligence Scale, Babcock Deterioration Test (most useful features), Goldstein-Weigl-Sheerer Sorting Test, Hanfmann-Kasanin Test, Word Association Test, Rorschach, Szondi Test, and the Thematic Apperception Test. Each of these tests was studied in detail, and statistical analyses made of the test data on 217 clinical and 54 control cases. Thus a summary of the diagnostic significance of success and failure on single items and indications of personality structure and of different kinds of mental disorder was obtained from individual tests and from the battery as a whole.

Instead of abandoning psychological tests because they are inadequate, other psychologists also have been developing the diagnostic potentialities of tests along these lines:

1. Better observation of the subject's cooperation and behavior while taking the test.
2. Clearer recognition of the objectives and limitations of each test.
3. Study of the qualitative interrelations among items and subtests.
4. More expert interpretation and synthesis of the results of various tests with information gained from interviews, observation, and questionnaires.
5. More stress on the "living clinical dynamics" revealed by the subject's responses in test situations.

"An Elementary Syllabus of Psychological Tests" (51) illustrates some of the above emphases.

The following are a few of the newer departures from the orthodox use of tests and rating scales:

To measure psychological understanding of human relations; subject is asked to respond to a test as he believes another person or a homogeneous group would respond (59).

To ascertain the influence on the results of a given test of factors such as social suggestion and conformity (6), parents' attitude (33), subject's response-bias (26), group psychotherapy (47), and attitudes hypnotically induced (32).

To compare test results of neurotic and "normal" subjects and to study the results further by means of factor analysis (8).

To use tests to understand personality problems of severely retarded children (52).

To construct specialized tests and inventories on the basis of clinical autobiographies, as, for example, an inventory for measuring psychological security and insecurity (39).

To use drawings as a basis for personality sketches (60) and the autobiography as an aid to psychotherapy (30).

Development of Screening Devices

During the war short tests, biographical questionnaires, and interviews were used effectively by slightly trained workers. Rodger (48) described the procedures used by recruiting assistants in the British Admiralty. Follow-up during training showed the value of the new method. Satisfactory reports on a man's operational proficiency, however, are difficult to obtain. Reports have been made of the following specific screening devices: the Maller Controlled Association Test (37), a neuropsychiatric questionnaire (23), the Shipley and Landis Personal Inventory, the Cornell Selectee Index (27), the group Rorschach (1, 27, 28), and the short personnel selection interview (42).

The inventory or questionnaire, which is essentially a group method of conducting a preliminary psychiatric interview, seems to have been more valuable for screening purposes in the armed forces than it has been with civilian populations. Proof of the value of these screening devices is not easily obtained. Mere comparisons of responses of men who have already broken down with those of normals are quite inadequate.

The Search for Syndromes

When personality is defined as a "dynamic organization of interacting forces which constitute its elements," techniques for the measurement of personality must be concerned with syndromes, patterns, clusters, and longitudinal data. Defining syndrome as "a group of measurable aspects of personality which vary together," Horn (25) described a method of studying the dynamic relations among a large number of observations and measurements on twenty-eight individual cases by combining intercorrelations of .50 or higher into clusters. This method is of value: (a) In expressing differences between groups in the patterning of their personalities, and (b) in making more meaningful a single aspect of personality in a context of related aspects.

An application of this type of statistical analysis to 5000 consecutive children examined at the Institute of Juvenile Research (28) revealed five syndromes of deviant behavior: (a) the overinhibited child, (b) the unsocialized aggressive child, (c) the socialized delinquent child who is well adjusted within a delinquent group, (d) the encephalitic or brain-damaged child, and (e) the schizoid child.

A graphic method of studying personality patterns in individuals was described in detail by Andrews and Muhlhahn (4).

Techniques for measuring the purposive aspect of personality require longitudinal study and measurement of variation in the individual from one set of conditions to another. Gregory (20) attempted to analyze patients' personalities from the standpoint of their purpose—what they seem to be trying to do. While Allport's concept of teleonomic trends is useful in understanding behavior, the elaborate classification of overlapping remembered items does not seem to be particularly helpful.

Cattell (12) described three types of trait unities established statistically by covariation of more specific traits: (a) common and unique traits, (b) surface traits (correlation clusters), (c) source traits (factors). It is his opinion that "the task of psychological comprehension and prediction demands the discovery of trait unities of a high degree of efficacy."

Projective Techniques

Perhaps the most important contribution of the projective techniques lies in the widespread application of the "projective hypothesis"—that every response a person makes is a reflection, a projection, of his private world of feeling and meaning. New developments in specific projective techniques need not be treated here because the research in this field has been covered in other reviews. For example, Sargent (53) recently surveyed the rationale of projective methods and their various applications. The critical attitude toward projective methods expressed by Cattell (13) is a wholesome anti-

dote to too sanguine acceptance of these technics and a deterrent to irresponsible interpretation and use of projective test results.

Shock Therapy⁴

Altho shock therapy lies more in the province of medicine than in the field of education, it is a development with which all therapists should be familiar. The conflicting results of research in this field may be attributed to a number of factors: the difficulty of accessing improvement objectively, the lack of control groups and follow-up studies over a period of years, the preponderance of unsubstantiated opinion presented as evidence, and the inexact definition of the kind and degree of disorders in which shock therapy has been used. Without the use of a control group there is no way of knowing whether the less severe cases treated might have been cured by psychotherapy alone within one or two months. Schnack, Shakow, and Lively (54) concluded from their control group experiment that approximately two-thirds of the improvement may be attributed to ordinary hospital routine and familiarity with the test situation. There is need for: (a) caution in the use of shock therapy because of its possible psychological and physical dangers to the patient (9, 34, 41), (b) better selection of cases for which a certain kind of therapy is most appropriate, and (c) continual search for the psychodynamics of the illness so that the cooperative and alert patient can be better assisted in his groping for insight leading to eventual recovery (15, 19, 50). A brief historical background and an understanding of the various agencies used in shock therapy is available in the summary by Stainbrook (58).

Group Therapy

Two reasons for the rapid rise of group therapy in the last two years are: (a) the need for serving a much larger number of persons than can be treated individually, and (b) the recognition that some persons are more responsive to group treatment than to individual psychotherapy. Group therapy gives the individual acceptance, support, release, ego-strengthening, reassurance, and derivative or direct insight (3, 56). There are a number of forms of group therapy, ranging from play technics and psychodrama to group discussion of personal mental hygiene problems (17, 31, 43, 45, 57). It is important to select the right kind of group for the right patient (18). A small beginning on the evaluation of the long-term effects of group therapy has been made (21).

Occupational Therapy and Rehabilitation

This is an important and timely topic which has been recently summarized by Elliott (16). Work appropriate to the individual is an important therapeutic agent (10).

Counseling and Psychotherapy

The interview and "nondirective" counseling have been reviewed in a recent issue of the REVIEW (49). Counseling and psychotherapy in which the individual takes responsibility and uses the resources within himself to gain a new orientation to himself and others and uses the counselor as a "catalytic agent" to activate his thought process, is not a new technic but a new and needed emphasis. Altho progress has been made in describing the counseling process, nothing highly significant has yet been reported on the scientific development and application of criteria for measuring progress in counseling and psychotherapy.

Present trends in psychoanalytic theory and practice were presented by Menninger and others in the January 1944 issue of the *Bulletin of the Menninger Clinic* (40). One trend is the emphasis on psychiatry for "normal" persons—the making available to large numbers of persons the implications of psychoanalytic theory. The question might be raised: How is this being done, and is it particularly desirable?

Case Studies

During this three-year period an increasing number of detailed case studies illustrating many methods of diagnosis and therapy (2, 22, 29, 44) have been published.

Evaluation of Mental Hygiene Technics

Many opinions as to the effectiveness of various kinds of diagnosis and therapy have been expressed and several criteria for measuring progress have been proposed. One criterion is nonreturn to the hospital or clinic. Wilder (61) gathered together statistics of this kind. Clinics seemed to show the poorest results, but the differences between hospitals, clinics, psychoanalytic institutes, and private practice were not impressive. Most of the evaluation has consisted of impressions of the worker; a typical example is the case reported by Combs (14). Some of the therapists' personal observations of their cases have extended for more than twenty-five years. Andriola (5) used case study data to appraise success and failure in the treatment of twenty-five truants, and Burt (11) tested three procedures with 183 school children: (a) informal but systematic interviews, (b) paper and pencil tests of the "indirect" type, and (c) observations of behavior in standardized real-life situations. Burt found that "judgments combining all three procedures are far superior to those based on any one alone" and that the "observations under real-life conditions had the greatest validity." The interviews proved more valid than the tests. Maberly (35) likewise concluded that at present a dynamic clinical history is a far more reliable indication of adjustment than attempts to measure separately instability, sensitivity, and emotional maturation. Admittedly there are vast

differences among interviewers in their ability to investigate the client's real-life behaviors, and a good deal of work still needs to be done in checking their diagnoses and decisions.

The measurement of progress in counseling and psychotherapy comes up against many obstacles. Before the relative values of different treatments can be validly determined, the following conditions must be met:

1. Standard means of describing research populations must be developed, including some measure of the individual's initial capacity for improvement.
2. Individual differences in response to various diagnostic and therapeutic methods must be recognized and the diagnostic significance of his responses ascertained.
3. Standard means of measuring the degree of clinical improvement are essential.
4. The effect of different environments on the individual's adjustment should be included in the evaluation of different technics and methods.
5. Long-term, as well as immediate, comprehensive follow-up of treatment should be made.

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CHAPTER VIII

School Health Education

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WORLD events of the past three years have accentuated the efforts of educators to reach better agreements regarding the place of health education in the total school program. Agreement has been expressed principally in recommendations, suggested standards, and policies aimed to give direction to the action which all groups concede must be taken. Research continues to be largely descriptive in nature altho some experimental studies are reported.

School Health Policies

The revised report, *Suggested School Health Policies* (38), is perhaps the most significant single document to appear. This report, endorsed by many education and health groups, represents a consensus of well-informed professional opinion. It suggested standards for the improvement of the total school health education program. The continued emphasis on physical fitness is reflected also in the 1945 yearbook of the American Association for School Administrators (1). Reports by the Educational Policies Commission presented recommendations for a minimal program of health education for every child (40). A committee of the North Central Association considered the importance of physical fitness and proposed that health education as a "fundamental" be the concern of the total school faculty and that sound programs already suggested be put into effect (3). The Chief State School Officers (53) recognized health education as a primary responsibility of state departments of public instruction and public health services as the function of the state departments of health.

Agreement of basic policies is indicated further in the cooperative efforts of nine national professional and lay agencies interested in child health (26), and in the activities of the Commission on Children in Wartime of the United States Children's Bureau (60). Action programs are proposed by this group also (61). Health education seems to be emerging as a priority for the peacetime curriculum.

Health Needs and Problems as a Basis for Health Teaching

There is strong support for the principle of building health education programs around the needs, interests, and problems of the learners. Likewise there is reasonably good agreement among health workers regarding the nature of these needs. A comprehensive statement of health needs of school age children with recommendations for its implementation has been compiled by a committee representing five national agencies (54).

The health needs of rural youth were given attention in the White House Conference on Rural Education and are reflected in the "Charter for the Education of Rural Children" (39). Frank (15) presented the physiological and emotional problems of adolescents and reminded us of their concerns about understanding themselves. Using several health inventories Neher (43) found that among 2415 high-school students the girls scored higher than the boys on health knowledge and attitudes; students of average or higher intelligence and from similar socio-economic levels scored higher on all factors; and only a slight positive correlation was found between health knowledge and attitudes and between health status and practices of students. Southworth, Latimer, and Turner (56) found little improvement in the scores of tenth, eleventh, and twelfth grade students with similar inventories. The health questions most frequently asked by these students were those relating to medical advice.

Applying recommended standards Jackson (22) found the health practices associated with interscholastic athletics to be poor. Wheatley emphasized the lack of responsibility assumed by high-school students for their own health (65), even in the face of the wide publicity given selective service data and the high incidence of remediable defects and preventable conditions among the teen age groups (41). Other needs were presented in studies dealing with the adequacy of the diet of all age and economic groups (29) and in the physical fitness programs for high-school and college youth proposed by the U. S. Office of Education (62, 63). In addition, Metheny (35) has reported the most frequent health problem among college women according to their self-analysis to be chronic fatigue. Children's questions as a basis for curriculum planning and needs were studied by Baker, who included health items (4).

Curriculum Planning and Content

Significant emphases in curriculum planning are the broadening of objectives resulting from our war experience (58), and greater participation on the part of the total school faculty (14). The earlier emphasis on school-health-agencies-community planning has been accelerated. Steps involved in successful planning are defined in the reports of Webster (64), Brown (8), Bliss (6), and a three-year project in two Michigan counties (36). At the state level the use of joint committees and the development of special projects has been stimulated by demonstrated war needs. Hoyman (21) reported a joint committee plan for Oregon, and Jacocks (23) a school health coordinating service for North Carolina. Twenty-four state departments of public instruction, assisted by the Kellogg Foundation, have developed special projects in community health education aimed at more functional health instruction for a large number of students, especially in high school; greater use of community resources; better planning; and more extensive teacher participation. Michigan was the first of the states

to develop such a project (51). The plans for California (30) and Washington (13) also have been described in some detail.

Content emphases reflecting wartime needs have centered around food and nutrition, alcohol and temperance, sex education and human relationships, venereal and other diseases, dental health, physical defects, accident prevention, and mental hygiene. The Sloan Experiment in Kentucky (55) and the reports of the Committee on Food Habits (21) have broadened the concept of nutrition education to include community and family living. In the field of temperance education the contributions of the School of Alcohol Studies of Yale University are outstanding in defining the problems, providing scientific content for teaching and in evaluating textbook material already in the field (25, 50). The controversial field of sex education is being treated as an "area" in health and human relationships and considered by students as an "essential" study (12). At the college level Kirkpatrick (28), Carter (10), and Rockwood (49) all presented data indicating the attitude and problems of college students towards courtship, marriage, and parenthood. Pickup reported an intensive project on malaria education for teachers and pupils (46). All of these fields are represented in manuals prepared by the U. S. Office of Education for health instruction in high schools and colleges (62, 63). A supplementary program of dental fitness is reported by Salzmann and Kramer (52). Suggested outlines of content have been developed by various states conducting community health education projects (13, 31, 51).

Methods of Teaching and Materials

Finding impelling incentives to motivate individuals to observe good health behaviors continues to be a major task for research. Mead (34) and others have pointed out the complexity of the problem of changing food habits. Lewin (33) studied the forces behind food habits and determined why people eat what they eat. He also showed that group decision is a more effective method than request or lecture in changing food habits of housewives. Bennett and Swartz (5) and Desmond and Baumgartner (11) obtained changes in diet among high-school students and housewives by employing the promotional methods of business. Strang concluded (58) that high-school students were motivated in healthful living when the problem to be solved or values to be achieved were real to them. The use of individual and group counseling as an aid in helping high-school girls appraise their own health and determine why they may not be achieving their optimal was described by Leonard (32).

In the field of venereal disease education Larimore and Sternberg (31) presented the army's experience in determining the most effective motives in preventing these diseases and Getzhoff (16) reported the influence of posters and lectures on the practice of enlisted men, according to their questionnaire responses.

Unless students are taught the discipline of correct thinking, Potthoff (47) contended that health teaching is likely to be of little practical value. Gold (18) emphasized the importance of full participation of teachers in changing the health knowledge and behavior of junior high-school students.

Studies pertaining to the readability or effectiveness of specific instructional materials are limited. The Sloan Experiment in Kentucky should provide interesting data on this point at some future date (55). Compilations of selected source materials continue, and to Byrd goes the credit of initiating the *Health Instruction Yearbook* (9).

Preparation for Professional Personnel

The kind of preparation in health education likely to be of greatest value to the classroom teacher or health specialist continues to be studied with emphasis on in-service education. Suggestions are contained in the reports of the study on teacher education sponsored by the American Council on Education (48) and the recommendation of the American Public Health Association regarding the qualifications for the preparation of the health educator (2). The workshop also continues as an accepted method of in-service education. Owen (44) and Stokes (57) have reported separately on a five-week course in health and human relations for teachers, while Jellinek and others (25) presented a symposium on alcohol education based on the first summer session of the School of Alcohol Studies of Yale University. In Los Angeles a course in sex education for teachers was given (27).

Evaluation

Evaluation was the theme of the *Forty-Fifth Yearbook of the National Society for the Study of Education* (42), the purpose of which was to provide teachers with accepted goals and suggestions on how to evaluate pupil learning in the area of understanding. One chapter was devoted to health education. Forty "authoritative" objectives were presented, as well as a list of twelve general appraisal procedures accompanied by a large number of specific illustrations as to how they might be applied by the classroom teacher to specific objectives. Boyd (7) has developed an instrument for measuring attitudes towards desirable food practices centering around the production, storage, and consumption of food, as part of the Sloan Experiment in Kentucky. The Committee on Food Habits has appraised research in the field and developed a *Manual for the Study of Food Habits*, which suggests the utilization of various methods of investigation. This manual contains a bibliography of 682 references (20). Partial appraisal of the Michigan Community Health Service Project was obtained thru the use of ten different procedures (37). The health knowledge test has been studied by Patty for reading difficulty (45), while Gold (18) has contributed a new standardized test equated in two forms with norms for different achievement levels within each of the junior high-school grades.

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CHAPTER IX

School Health Services

GEORGE M. WHEATLEY

RESEARCH in school health service during the war years has been neither very extensive nor very significant. There have been, however, several studies and reports worthy of some elaboration because they concern fundamental areas. Furthermore, it may be that, because of current popular interest as an aftermath of World War II, these reports may be more successful in influencing thought and practice than those made in peacetime.

The School Medical Examination

The school medical examination has been the subject of considerable study. This in itself is not noteworthy because it has been the object of review ever since medical examinations became the basis of school health service. The significance of this attention to the medical examination is the emergence of the concept that the examination can and should be an educational experience. A variety of reports in both medical and educational literature lead to this generalization. Rugen and Nyswander (18) in the *Forty-Fifth Yearbook of the National Society for the Study of Education* included the results of health service experiences as one of the most important measures of children's understanding of health. Wilzbach (31) reported the findings from the medical and dental examination of 5620 junior and senior high-school students and indicated that more than 80 percent required dental care, 6 percent had impaired vision, 2 percent had hearing loss, and over 5 percent had an abnormal heart condition. These children had not lacked medical supervision prior to this survey. Most of them were under the year-round supervision of private physicians. They had been examined in preschool roundups and in the first, third, fifth, and ninth grades, and had also been reexamined to qualify for athletic competition. But these physical examinations apparently had little impact on the students. When there is a purpose behind the examination, and when that purpose is understood by the recipient and the family, action results. Because the examination program described by Wilzbach was part of a Physical Fitness Victory Corps program, it had special significance in the eyes of the student, the faculty, the examining physicians and nurses, and the parents and the doctors in the community. Within six months after the start of the examination program, 80 percent of the students who needed care for their vision had received it. The record was comparable for other conditions. The conclusion is that periodic or annual examinations are generally fruitless unless accompanied by an educational program which motivates the individual to receive care for his health problem and to make the examination a satisfying experience.

Blanchard (1) reported that students have reacted to the usual school medical examination by family physicians as well as school physicians with such comments as "The doctor was in too much of a hurry," "He only listened to my heart," "They aren't interested to ask you any questions," "We never know what the doctor thinks about us."

The draft findings have helped to awaken the family physician to his responsibilities in health guidance which may eventually improve the health examination of the school child. Dunham (2), writing of the experience and impressions of a rural examining physician, admitted the physician has not measured up to his potentialities as a source of health education. Wilson (30) stated that the most effective results were obtained in the health service program where it was integrated with effective health teaching. The educational opportunities in the health service program have been described (28). The term "health counseling" has been more widely used to suggest the opportunity in the school for guidance and interpretation to the family and the student concerning the individual pupil's health needs. Leonard (8) has reported her counseling experience with adolescents.

This educational and counseling aspect is the important problem in school health service according to Strang and Smiley (22). Also, it has been emphasized by the Educational Policies Commission in its report *Education for ALL American Youth* (14). What is accomplished for the health of the child, however, depends in great measure upon the interest and skill of the physicians of the community.

Powers (19), in reviewing medical problems of school children, has called attention to their emotional and behavior difficulties. He finds about one-third of school children seen in a pediatric clinic have complaints which are based upon nervous, mental, or emotional disease. The adequate study and treatment of such cases is beyond the individual physician, no matter how able and understanding. It requires the special skills of psychologists, psychiatrist, and special educational workers. Special services are required for vision, hearing, orthopedic, and cardiac problems as well as mental disorders.

The Teacher and the Health Service

Miller (12), Nyswander (18) and Harold and Hershey (5) have shown that the teacher can do a very effective job with respect to the health of her children in recognizing normal conditions, segregating deviations, and making judgments. This recognition of the teacher's front-line position in health service is not new. What is new is the research to validate the teacher's ability to serve in this capacity. These studies have had the effect of substantiating a thesis long held by students of school health service and of stimulating the preparation of teachers to aid them to observe the health of children. Several states (6, 7, 16, 17, 24), thru the cooperation of their education and health departments, have produced very useful materials to guide teachers. In-service training courses have been stimulated and offered

by some teacher-training institutions. One of the first leaders in school health service, James F. Rogers of the U. S. Office of Education, early understood the importance of the teacher as an integral part of school health service. His publication *What Every Teacher Should Know About the Physical Condition of Her Pupils* is a classic. For years it was the only material available in sufficient quantity to serve teachers as a guide in the health observation of their pupils. This publication (20) has been completely rewritten and reprinted in the light of modern developments in pediatrics and child care.

There has been needed, in addition to written material for teachers, visual aids to help them see the characteristics of good health and the early signs suggestive of ill health. The School Health Bureau of the Metropolitan Life Insurance Company has just released a colored film strip (11), which is the result of a three-year experiment to reproduce by color photography the characteristics of good health in children and some of the more common signs of illness or an under par condition. The film strip was photographed in the Children's Clinic of the New York Hospital—Cornell Medical Center and at the Hunter College Elementary School. The strip has been released to state departments of health and education, social agencies, parent-teacher associations, and school health authorities.

Growth and Development

Recent studies indicate that the period of adolescence is longer than was previously believed. Stuart (23) reported that it covers roughly the second half of the period of development. A contribution of distinction was the yearbook on adolescence (15), a critical summary of studies of individual development based on technics of investigation in physiology, physical measurement, psychology, and sociology by a group of distinguished contributors. Gesell and his associates (4) have done a somewhat similar study of the child from age five to ten. Meredith and Meredith (9) found the typical Toronto school boy aged 13 and 14 was taller in 1939 than was the boy of 1892 by nearly 9 centimeters, and the typical boy of 1923 was about midway between. The differences at all ages were in the same direction but to a less marked degree. Howard Meredith also found that school boys in the United States today, both white and Negro, are 6 to 8 percent taller and 12 to 15 percent heavier than were boys half a century ago (10). The causes for these evidences of increasing size with time call for further study, but they are doubtless related to differences in the incidence of illness in early life, to dietary habits, to habits of activity, and to other more obscure factors generally referred to as socio-economic.

Air Sanitation

The war greatly advanced knowledge of air sanitation. The problem of controlling respiratory diseases among troops in barracks led to study of

several promising methods of air purification, such as ultraviolet irradiation of the air, dust-suppressive measures, and the use of germicidal chemical vapors. The application of these technics to the control of communicable diseases in civilian life has great potentialities. Mudd (13) reviewed some of these possibilities. The only research published on the use of these measures in schools is the work of Wells, Wells, and Wilder (25) and by Wells and Wells (26), which relates to the use of ultraviolet light. These writers reported the successful control of chickenpox and measles when the source of the contagion was in the school. It is significant, however, that the authors were unsuccessful in controlling colds, presumably because there was adequate opportunity to contract the colds in unprotected environments outside the school. It should be emphasized that air sanitation for schools is still in the experimental stage. More study of the practical application of ultraviolet lights to schools as well as investigation of dust-suppressive measures and the germicidal sprays must be carried out before their value in the control of communicable disease among school children can be known.

Evaluation of Health Programs

A research project of interest is the study of health and physical education initiated in February 1944 by the joint staff of the New York State Education Department's Division of Research and Division of Health and Physical Education (17). This project seeks to answer two questions in each of the three areas of the program—school health service, health teaching, and physical education: (a) To what extent are the regulations pertaining to the school health program carried out in the schools of the state, outside the large cities? (b) What are the results, in terms of pupil outcomes, of different local programs? The answer to the second question required exploration in new areas of study, especially in regard to the level of pupil health, attitudes toward health, actual health behavior, and physical skills. In the search for indexes of pupil health status, special statistical technics were developed, which may become a useful administrative and supervisory tool.

A summary of the findings concerning the health service aspect of the program showed that the schools rather generally met the letter of specific laws and regulations. For example, all the schools employed a physician and each pupil was examined every year. But only 23 percent of the schools met the approved ratio of physician to pupil. In spite of the inadequacy of medical service in most of the schools, very little effort was made to supplement the school service by encouraging families to use their own physician for the child's health examination. Only 3 percent of the schools had private physician examinations for more than 10 percent of its pupils. School medical examination records were found inadequate as a source of information as to pupil health status.

Pupil health records were less regularly filled out with respect to recom-

mentations of the physician than with respect to defects found, still less with respect to treatments secured. In more than half the schools, the parts of the record dealing with a history of illness and teacher observations were not used at all. On the other hand, records of height and weight were used to derive two indexes: (a) a development level for age and (b) maintenance of body-build. The Wetzel Grid (27) method of recording height and weight was found helpful in demonstrating these relationships. An interesting but puzzling discovery was that absence for illness was higher in the schools with the best over-all health programs than in the schools with the poorest over-all programs, altho there was no significant difference between the two groups in percent of total absence.

Summary

War has once more called attention to the importance of fostering and protecting the welfare of children. Studies reveal that school medical examinations which have served as the cornerstone of the school health program leave much to be desired from a fact-finding as well as educational point of view. There is a growing awareness of the need for specialist services to provide more accurate detection of abnormalities. The necessity for closer working relationships between the school and the community treatment resources to achieve medical and dental care for children is apparent. It is evident, too, that better preparation of school health personnel is needed, including greater emphasis on the important role of the teacher in the health service program. With this heightened understanding must come a more vigorous and critical inquiry into current practice. No more complex field of research exists than school health, concerned as it is with the learning and the biological processes. No more challenging study invites the investigator because, thru the marriage of these two disciplines, should come new knowledge in the prevention of disease and the improvement of health.

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CHAPTER X

Contributions of Physical Education to Physical Fitness

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TO HAVE meaning, research must be viewed against the background of the period from which it emerged. Only by so doing can the contributions of the last three years be presented in sufficiently discerning perspective to evaluate their educational significance.

The examination of large numbers of Selective Service registrants and the induction of the fit into the armed forces was followed not only by a study of rejections and their cause, but also by clarification of the physical and mental qualities necessary to meet the exacting manpower needs of war (17). The national neglect of health and fitness thus revealed, led in 1943 to the creation by executive order of a Committee on Physical Fitness functioning under the egis of the Federal Security Agency. To this action was subsequently added the support of organized medicine, thus, apathy and indifference were supplanted by widespread interest in the institution of corrective measures designed to reduce the time and effort required to bring the bodily development of inductees to a level adequate to meet the rigors of combat.

Immediate therapeutics took the form of war adaptations of physical activities too numerous to cite individually. Notable among these were the extensive introduction of military aquatics, vigorous conditioning exercises, and various forms of developmental combatives. The imagination and vigor that went into the initiation of these programs stands to the credit of the professional physical educator, even tho nothing in the literature gives demonstrable evidence of the military utility of the mass pedagogical experiment to which preinductees of school age were subjected.

Emphasis on the Biological Values of Exercise

The general physical education literature of the last three years divides writers into two clearly defined camps. First, those who have rallied to the defense of traditional peacetime activity programs with their emphasis on socio-psychologic objectives, disclaiming responsibility for the unfitness of America's youth and laying the blame on poorly trained leadership, inadequate facilities, overcrowded classes, insufficient time, and the indifference of controlling agencies. Others, not insensible to the significance of the success of military physical fitness and convalescent training and reconditioning programs, subjected the philosophies and technics of the last two decades to searching reexamination. From this scrutiny emerged a conviction that physical developmental needs had not been met by the programs and practices of prewar years, and that it is the inescapable basic concern of physical education to provide these needs.

The most fundamental indictment of prewar activity programs was directed at their dosage. Improvement in the prepotent functional components of fitness is achieved only as a result of disciplined training which is pitched at a level that strains capacity, and then grows progressively more severe as physiological adaptations augment speed, skill, strength, endurance, and power (20).

Evaluating Physical Fitness

Few areas in human biology are more complex than the quantitative assessment of physical fitness and the measurement of man's performance (6, 21, 22, 23). The need for such appraisalment was defined by Cureton in the early years of the war (3). The methodology of selecting and validating test items which measure motor skill fitness is well known, but such tests had never before been applied so extensively to such large samples of medically fit individuals under such favorable experimental conditions (2, 12, 14). The exigencies of war gave rise to testing on an unprecedented scale.

So called functional or dynamic fitness has also been subjected to exhaustive study. This aspect of fitness requires measurement of the general efficiency of the body in the performance of strenuous work. Systematic study of this problem commenced in 1942 with the publication of two physiological criteria of considerable practical importance: first, *work index* = the duration of exercise in seconds — maximum pulse rate in beats per minute + the maximum lactate in mg./100 cc. of blood (7); and second, *index of fitness* = the duration of a standard exhausting exercise in seconds \times 100, divided by $2 \times$ the sum of the pulses in recovery (8). Between February 1942 and October 1944, Brouha and his associates published nineteen papers on the subject of dynamic fitness, six of which appear in Vol. XV of the *Yale Journal of Biology and Medicine*. The viewpoints of the group are in part epitomized in one of the final contributions of the series (4).

Measuring Effectiveness of Physical Activity Programs

The Brouha papers were concerned not only with measurement of the dynamic fitness of adolescents and young adults of both sexes, but also with the utilization of the objective criterion proposed in the assessment of the efficiency of physical activity programs. Prior to this, little had been done to determine whether biological effects purported to be the concomitants of exercise were actually produced. Others added similar information, unequivocally demonstrating the capacity of specially directed physical training programs to enhance both dynamic and motor fitness (3, 11, 24). Activities geared to the capacities of the mediocre yielded negative results in accord with the overload concept, or led to regression in fitness when administered to students with a high initial ability (15).

Wilbur (25) attempted to prove the superiority of the "sport" vs. the "apparatus" method of teaching.

New Areas of Activity

One of the most dramatic chapters in the recent history of war medicine is that written by those who contributed to the convalescent training and reconditioning programs of our military hospitals (13, 18). Altho much of the evidence is purely clinical, empirical experience suggests that the recovery from disabling injury or disease may be significantly expedited by the judicious use of early and progressive exercise. Its benefits in the management of convalescence from rheumatic fever and primary atypical pneumonia are described in the literature (9, 16).

Writing on "the shape of things to come", Shea (19) sounded a thoughtful and realistic keynote for the future with stress on the principle of "practicalization," and stress on the lessening of emphasis on educational technic and socio-recreative objectives in activity programs. Altho the expedients of war need not be made the necessities of today, proper emphasis on vigorous conditioning activities should be continued. An expanding interest in the reconditioning of the handicapped and the deviate assures the continued concern of physical educators for participation in the comparatively new field of service to the sick, known as Physical Medicine (5, 10). Bilik (1) sounded a timely caution lest in their zeal physical educators encroach upon the practice of the healing art.

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CHAPTER XI

Relationships of Physical Education to Mental Health*

JOHN E. DAVIS

DEVELOPMENT of the general field of psychiatry, representing an evolution from "sorcery to science," has led to a more careful evaluation and appreciation of the mental hygienic forces inherent in physical education. The increased interest in mental hygiene during war years has led to extensive discussion of the relationships of physical education to mental health but not to experimental work and clinical studies conducted under research methods. At this stage, however, it will be useful to review the ways in which physical education activities have been used to contribute to mental health: as preventive aids, as a therapeutic agent with particular attention to psychiatric concepts of play (24, 31, 34), and as adjuvants to medical treatment (29).

Psychiatric Concepts of Physical Education

For more than twenty-five years, significant contributions to a psychiatric concept of recreation and physical education and the psychotherapeutic values of physical activity have been made by Brush (4) and other investigators. Davis (9) has reviewed these contributions. More recently Menninger (24) pointed out the values of play activities in the treatment of psychotic patients.

A program of convalescent training in which physical recreational activities played an important motivational role in both physical and mental rehabilitation was described by Rusk and Taylor of the Army Air Forces (35). This use of physical activities became one of the most important therapeutic contributions of physical education developed in World War II. The broad developments in this field have been accompanied by increased specialization.

Medical Adjuvants

Physical and psychological specializations of physical educational activities have gained an important role as medical adjuvants. Notable strides have been made in the remedial as well as in the palliative aspects. Physical education has been incorporated in a modernized treatment of combat fatigue, psychoneurosis and psychosis, both civilian and war (16, 17, 20, 22, 27, 30, 33). Campbell and Davis (5) have reported in the *American Journal of Psychiatry* the operation of a highly diversified program of physical education for psychotic patients, its development, results, and

* As this review is the first on this topic in this series, some references published earlier than 1943 are included.

failures over a period of seventeen years. This report provides an historical résumé of physical education in its distinctive relationships to the treatment of the mentally sick.

Expanding Areas

The value of physical education activities as mental health aids and as psychotherapy have stressed the role of play as a psychological release from anxiety for psychoneurotic and psychotic conditions (8, 28, 34) and big muscle activity as a natural and extroverting activity, a means of inciting competition, promoting cooperation, modifying behavior, and providing satisfaction in achievement (1, 3, 10, 26, 36). Physical education contributes indirect motivational values, as well as direct reeducative technics (2, 26). The extension of educational activities into the community suggests numerous studies in socialization and resocialization in which physical education methods have become increasingly important (3, 23).

The use of physical education activities has also developed in the direction of child play analysis (1, 14, 18, 28), the psychological balance in work adjustment (25, 30, 31), and recreational therapy for the chronic alcoholic, in which physical education provides a distinctly valuable palliative (11).

Physical education in relationship to mental health has evolved from the physical to the psychological (4, 32), social (21), medical (29), psychosomatic (15, 20), resocializing (3, 10), and mental hygiene phases (6, 34)—each step in this process of evolution producing important contributions to the concept of treatment of the whole man.

The value of physical educational activities in "getting close to the mentally sick patient" in the development of empathy, has received considerable stress in psychiatric practice. Dr. Roy J. Hoskins, Director of Research, Memorial Foundation of Neuroendocrine Research, Harvard Medical School, states: "In the patients whom I have seen leave our hospitals in a state of remission, I have been more impressed with the improvement of their empathic capacity than with any other change" (19).

Trends and Future Needs

Physical education has significant and important potentialities in the prevention, diagnosis, treatment, and interpretation of mental illness. There is a need to deepen and broaden the social bases of play, and to provide psychiatric analyses and tests to afford a more scientific foundation for such psychiatric applications (24).

More specifically, there is a need to develop general spontaneity in play as basic material for psychological tests to be used in diagnosis and treatment, to develop further physical exercise specializations to meet the distinctive needs of various mental disease entities (12), and to develop under

direction of the psychiatrist specialized physical education activities for psychoneurotic and psychotic patients receiving electric shock, insulin therapy, and other drastic treatments, after the patient becomes more accessible to social and socializing physical activities, as a result of treatment. These uses would bring physical education into a highly specialized psychiatric field, which requires technical training as well as the closest liaison between the physical exercise therapist and the psychiatrist.

These growing relationships of physical exercise to increasing specialization in psychiatry, involving a significant increase in the range and nature of activities, points to the necessity of intensive training (10). Dr. Paul R. Hawley, chief medical director of the Veterans Administration, and Dr. Donald A. Covalt, assistant medical director, Medical Rehabilitation, have organized a special school at the Winter General Hospital, Topeka, Kansas, under Dr. Karl Menninger for this purpose. Briefly, the combined psychiatric staffs of the Menninger Clinic and Winter General Hospital, with the aid of specialists in physical education, are presenting a course of instruction which includes: a study of the patient as an individual; the modification of physical activities to meet his distinctive needs; a study of various disease entities in relationship to interest and capacity for physical activity; and technics for observing physical and mental reactions.

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REVIEW OF EDUCATIONAL RESEARCH

The REVIEW is published five times a year, each issue dealing with one topic from a relatively fixed list of fifteen topics. Three years constitute a cycle. Minor variations occurred during the first three cycles; beginning with the fourth cycle, in 1940, five topics were replaced by new ones, in subjectmatter fields.

The issues published to date are listed below. Because topics have been changed from time to time there are twenty-two listed; the actual titles of those listed may vary somewhat from cycle to cycle. Each issue is priced at \$1, postpaid, with discounts on quantity orders as follows: 10 percent discount on two to nine copies; 25 percent discount on ten to ninety-nine copies; 33½ percent discount on one hundred or more copies. Orders should be sent to 1201 Sixteenth St., N. W., Washington 6, D. C.

1. HISTORY OF EDUCATION AND COMPARATIVE EDUCATION. VI:4 (October 1936); IX:4 (October 1939).
2. SOCIAL BACKGROUND OF EDUCATION. VII:1 (February 1937); X:1 (February 1940); XIII: 1 (February 1943); XVI:1 (February 1946).
3. ORGANIZATION AND ADMINISTRATION OF EDUCATION. I:3 (June 1931); IV:4 (October 1934); VII:4 (October 1937); X:4 (October 1940); XIII:4 (October 1943); XVI:4 (October 1946).
4. LEGAL BASIS OF EDUCATION. III:5 (December 1933).
5. FINANCE AND BUSINESS ADMINISTRATION. II:2 (April 1932); V:2 (April 1935); VIII:2 (April 1938); XI:2 (April 1941); XIV:2 (April 1944).
6. SCHOOL PLANT AND EQUIPMENT. II:5 (December 1932); V:4 (October 1935); VIII:4 (October 1938); VII:2 (April 1942); XV:1 (February 1945).
7. TEACHER PERSONNEL. I:2 (April 1931); IV:3 (June 1934); VII:3 (June 1937); X:3 (June 1940); XIII:3 (June 1943); XVI:3 (June 1946).
8. PUPIL PERSONNEL, GUIDANCE, AND COUNSELING. III:3 (June 1933); VI:2 (April 1936); IX:2 (April 1939); XII:1 (February 1942); XV:2 (April 1945).
9. PSYCHOLOGICAL TESTS AND THEIR USES. II:3 (June 1932); II:4 (October 1932); V:3 (June 1935); VIII:3 (June 1938); XI:1 (February 1941); XIV: (February 1944).
10. EDUCATIONAL TESTS AND THEIR USES. III:1 (February 1933); V:5 (December 1935); VIII:5 (December 1938). Future issues to be merged with topic 22.
11. GROWTH AND DEVELOPMENT. III:2 (April 1933); VI:1 (February 1936); IX:1 (February 1939); XI:5 (December 1941); XIV:5 (December 1944).
12. MENTAL AND PHYSICAL HEALTH. VI:5 (December 1936); X:5 (December 1940); XIII:5 (December 1943); XVI:5 (December 1946).
13. THE CURRICULUM. I:1 (January 1931); IV:2 (April 1934); VII:2 (April 1937); Future issues to be merged with topic 14.
14. GENERAL ASPECTS OF INSTRUCTION: LEARNING, TEACHING, AND THE CURRICULUM. (The first three cycles included Supervision, which subsequently appears in topic 3.) III:4 (October 1933); VI:3 (June 1936); IX:3 (June 1939); XII:3 (June 1942); XV:3 (June 1945).
15. SPECIAL METHODS AND PSYCHOLOGY OF ELEMENTARY SCHOOL SUBJECTS. I:4 (October 1931); I:5 (December 1931); V:1 (February 1935); VII:5 (December 1937). Research subsequently treated under topics 12, 17, 18, 19, 20.
16. PSYCHOLOGY AND METHODS IN HIGH SCHOOL AND COLLEGE. I:5 (December 1931); II:1 (February 1932); IV:5 (December 1934); VIII:1 (February 1938); XVI:2 (April 1946). Research subsequently treated under topics 12, 17, 18, 19, 20.
17. LANGUAGE ARTS AND FINE ARTS. X:2 (April 1940); XIII:2 (April 1943). (Prior to 1943 Fine Arts appeared in XI:4 Part I.)
18. FINE AND APPLIED ARTS, COMMERCIAL EDUCATION, AND HOME AND FAMILY LIVING. XI:4 Part 1 (October 1941). (Fine Arts subsequently covered in topic 17.)
19. THE NATIONAL SCIENCES AND MATHEMATICS. XII:4 (October 1942); XV:4 (October 1945).
20. THE SOCIAL STUDIES. XI:4 Part 2 (October 1941).
21. EDUCATION OF EXCEPTIONAL CHILDREN AND MINORITY GROUPS. XI:3 (June 1941); XIV:3 (June 1944)
22. METHODS OF RESEARCH AND APPRAISAL IN EDUCATION. IV:1 (February 1934); IX:5 (December 1939); XII:5 (December 1942); XV:5 (December 1945).

Forthcoming Issues

PSYCHOLOGICAL TESTS AND THEIR USES. February 1947, Herbert S. Conrad, Chairman.
 FINANCE AND BUSINESS ADMINISTRATION. April 1947, Harry P. Smith, Chairman.
 EDUCATION FOR WORK AND FAMILY LIVING. June 1947, Hester Chadderdon, Chairman.
 EDUCATION FOR CITIZENSHIP. October 1947, Howard Y. McClusky, Chairman.
 GROWTH AND DEVELOPMENT. December 1947, Nancy Bayley, Chairman.